UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION	**)** **)**	**Docket No. _____**

PETITION OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION FOR APPROVAL OF PROPOSED RELIABILITY STANDARDS FOR FACILITY CONNECTION REQUIREMENTS FAC-001-2 AND FAC-002-2

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FAC-001-2 AND FAC-002-2

Pursuant to Section 215(d)(1) of the Federal Power Act ("FPA")[1] and Section 39.5[2] of the Federal Energy Regulatory Commission's ("FERC" or "Commission") regulations, the North American Electric Reliability Corporation ("NERC")[3] hereby submits proposed Reliability Standards FAC-001-2 and FAC-002-2 for Commission approval. NERC requests that the Commission approve the proposed Reliability Standards (**Exhibit A**) and find that the proposed Reliability Standards are just, reasonable, not unduly discriminatory or preferential, and in the public interest.[4] NERC also requests approval of the associated implementation plan (**Exhibit B**), Violation Risk Factors ("VRFs") and Violation Severity Levels ("VSLs") (**Exhibit E**), as detailed in this petition.

As required by Section 39.5(a)[5] of the Commission's regulations, this petition presents the technical basis and purpose of proposed Reliability Standards FAC-001-2 and FAC-002-2, a

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[1] 16 U.S.C. § 824o (2012).

[2] 18 C.F.R. § 39.5 (2014).

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

[4] Unless otherwise designated, all capitalized terms shall have the meaning set forth in the *Glossary of Terms Used in NERC Reliability Standards*, *available at* http://www.nerc.com/files/Glossary_of_Terms.pdf. Throughout the proposed FAC-001-2 and FAC-002-2 Reliability Standards, the lowercase term "interconnection" is deliberately used and does not refer to the defined term "Interconnection" in the *Glossary of Terms Used in NERC Reliability Standards.*

[5] 18 C.F.R. § 39.5(a) (2014).

demonstration that the proposed Reliability Standards meet the criteria identified by the Commission in Order No. 672[6] (**Exhibit C**) and a summary of the development history (**Exhibit G**). Proposed Reliability Standards FAC-001-2 and FAC-002-2 were approved by the NERC Board of Trustees on August 14, 2014.

I. EXECUTIVE SUMMARY

The Facility Design, Connections, and Maintenance ("FAC") Reliability Standards address topics such as facility interconnection requirements, facility ratings, system operating limits, and transfer capabilities. The FAC Reliability Standards also establish requirements for maintaining equipment and rights-of-way, including vegetation management. Proposed Reliability Standard FAC-001-2 requires that Transmission Owners and applicable Generator Owners document and make Facility interconnection requirements available so that entities seeking to interconnect have the necessary information. Proposed Reliability Standard FAC-002-2 ensures that the reliability impact of interconnecting new or materially modified Facilities is studied. Collectively, proposed Reliability Standards FAC-001-2 and FAC-002-2 ensure that there is appropriate coordination and communication regarding the interconnection of Facilities, which improves the reliability of the Bulk-Power System. These reliability objectives are also consistent with Commission precedent regarding the need for standardized procedures for interconnecting generators.[7]

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

[7] *See Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, FERC Stats. & Regs. ¶ 31,146 (2003), *order on reh'g*, Order 2003-A, FERC Stats. & Regs. ¶ 31,160 (2004), *order on reh'g*, Order No. 2003-B, FERC Stats. & Regs. ¶ 31,171 (2004), *order on reh'g*, Order No. 2003-C, FERC Stats. & Regs. ¶ 31,190 (2005), *affirmed sub. nom. Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007).

The proposed revisions to Reliability Standards FAC-001-2 and FAC-002-2 are consistent with the principles of Paragraph 81, which involve the examination for duplication across the NERC body of Reliability Standards and the technical basis and necessity for each and every requirement.[8] For example, revisions are proposed to Requirement R1 of Reliability Standard FAC-001-2 to eliminate redundancies with FAC-002-2 and to clarify the actions required. The proposed revisions are designed to maintain the existing reliability goals, while providing responsible entities with flexibility regarding how they fulfill the actions required.

NERC requests that the Commission approve proposed Reliability Standards FAC-001-2 and FAC-002-2 and find that the proposed standards are just, reasonable, not unduly discriminatory or preferential, and in the public interest.

II. NOTICES AND COMMUNICATIONS

Notices and communications with respect to this filing may be addressed to the following:[9]

[8] *See Electric Reliability Organization Proposal to Retire Requirements in Reliability Standards*, Order No. 788, 145 FERC ¶ 61,147 (2013).

[9] Persons to be included on the Commission's service list are identified by an asterisk. NERC respectfully requests a waiver of Rule 203 of the Commission's regulations, 18 C.F.R. § 385.203 (2013), to allow the inclusion of more than two persons on the service list in this proceeding.

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A. Regulatory Framework

By enacting the Energy Policy Act of 2005,[10] Congress entrusted the Commission with the duties of approving and enforcing rules to ensure the reliability of the Nation's Bulk-Power System, and with the duties of certifying an Electric Reliability Organization ("ERO") that would be charged with developing and enforcing mandatory Reliability Standards, subject to Commission approval. Section 215(b)(1)[11] of the FPA states that all users, owners, and operators of the Bulk-Power System in the United States will be subject to Commission-approved Reliability Standards. Section 215(d)(5)[12] of the FPA authorizes the Commission to order the ERO to submit a new or modified Reliability Standard. Section 39.5(a)[13] of the Commission's regulations requires the ERO to file with the Commission for its approval each Reliability Standard that the ERO proposes should become mandatory and enforceable in the United States, and each modification to a Reliability Standard that the ERO proposes should be made effective.

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[10] 16 U.S.C. § 824o (2006).
[11] *Id.* § 824o(b)(1).
[12] *Id.* § 824o(d)(5).
[13] 18 C.F.R. § 39.5(a) (2014).

The Commission has the regulatory responsibility to approve Reliability Standards that protect the reliability of the Bulk-Power System and to ensure that such Reliability Standards are just, reasonable, not unduly discriminatory or preferential, and in the public interest. Pursuant to Section 215(d)(2) of the FPA[14] and Section 39.5(c)[15] of the Commission's regulations, the Commission will give due weight to the technical expertise of the ERO with respect to the content of a Reliability Standard.

B. NERC Reliability Standards Development Process

The proposed Reliability Standards were developed in an open and fair manner and in accordance with the Commission-approved Reliability Standard development process.[16] NERC develops Reliability Standards in accordance with Section 300 ("Reliability Standards Development") of its Rules of Procedure and the NERC Standard Processes Manual.[17] In its ERO Certification Order, the Commission found that NERC's proposed rules provide for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing Reliability Standards and thus satisfies certain of the criteria for approving Reliability Standards.[18] The development process is open to any person or entity with a legitimate interest in the reliability of the Bulk-Power System. NERC considers the comments of all stakeholders, and a vote of stakeholders and the NERC Board of Trustees is required to approve a Reliability Standard before the Reliability Standard is submitted to the Commission for approval.

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[14] 16 U.S.C. § 824o(d)(2) (2006).

[15] 18 C.F.R. § 39.5(c)(1) (2012).

[16] *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

[17] The NERC Rules of Procedure are available at http://www.nerc.com/AboutNERC/Pages/Rules-of-Procedure.aspx. The NERC Standard Processes Manual is available at http://www.nerc.com/comm/SC/Documents/Appendix_3A_StandardsProcessesManual.pdf.

[18] 116 FERC ¶ 61,062 at P 250 (2006).

C. History of Project 2010-02: Connecting New Facilities to the Grid

The NERC Standard Processes Manual requires NERC to conduct periodic reviews of Reliability Standards[19] and consistent with this requirement, a periodic review was conducted of the Facilities Design, Connections, and Maintenance ("FAC") body of Reliability Standards.

The NERC Standards Committee appointed six industry experts to serve on the FAC five-year review team on April 22, 2013. The review team recommended revisions to Reliability Standards FAC-001-1 and FAC-002-1 and affirmed FAC-003-3, FAC-008-3 and FAC-013-2.[20] A Standards Authorization Request was then initiated to revise Reliability Standards FAC-001-1 and FAC-002-1 and a standard drafting team was appointed.

III. JUSTIFICATION FOR APPROVAL

As discussed in detail in **Exhibit C**, proposed Reliability Standards FAC-001-2 and FAC-002-2 satisfy the Commission's criteria in Order No. 672 and are just, reasonable, not unduly discriminatory or preferential, and in the public interest. Provided below is the following: (A) a description of each proposed Reliability Standard and discussion of how applicable Commission directives are satisfied; and (B) justification for the proposed Reliability Standards on a Requirement-by-Requirement basis.

A. Reliability Standard FAC-001-2 – Facility Interconnection Requirements

The purpose of FAC-001 is to avoid adverse impacts on the reliability of the Bulk Electric System by requiring Transmission Owners and applicable Generator Owners to

[19] Section 13.0 of the NERC Standard Processes Manual provides: "All Reliability Standards shall be reviewed at least once every ten years from the effective date of the Reliability Standard or the date of the latest Board of Trustees adoption to a revision of the Reliability Standard, whichever is later."

[20] The review team also recommended to delay the review of Reliability Standards FAC-010-2.1, FAC-011-2, and FAC-014-2. WECC separately reviewed and affirmed regional Reliability Standard FAC-501-WECC-1.

document Facility interconnection requirements and to make them available so that entities seeking to interconnect will have the necessary information.

1. Procedural Background

Reliability Standard FAC-001-0 was accepted by the Commission in Order No. 693.[21] In order to expand its applicability to Generator Owners and to modernize the formatting of FAC-001-0, FAC-001-1 was developed by NERC and was approved by the Commission on September 19, 2013,[22] with an effective implementation date for Transmission Owners on November 25, 2013 and for Generation Owners on January 1, 2015.

2. Requirement-by-Requirement Justification

Proposed Reliability Standard FAC-001-2—Facility Interconnection Requirements consists of four requirements and is applicable to Transmission Owners and Generator Owners with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission System (i.e., an applicable Generator Owner). Proposed Requirements R1 and R3 apply to Transmission Owners, and proposed Requirements R2 and R4 apply to applicable Generator Owners. Proposed Requirements R2 and R4 are identical, except for its applicability.

Proposed FAC-001-2, Requirement R1

> **R1. Each Transmission Owner shall document Facility interconnection requirements, update them as needed, and make them available upon request. Each Transmission Owner's Facility interconnection requirements shall address interconnection requirements for:**
>
> **1.1. generation Facilities;**
> **1.2. transmission Facilities; and**
> **1.3. end-user Facilities**

[21] Order No. 693 at P 680.
[22] Order No. 785 at P 19.

Proposed Requirement R1 of FAC-001-2 requires Transmission Owners to document Facility interconnection requirements, to update them, and to provide them upon request. This requirement is substantively unchanged from the currently-effective Requirement R1 of FAC-001-1, which requires Transmission Owners to document, maintain and publish Facility connection requirements. The proposed changes are intended to clarify the actions required and are designed to achieve the same reliability goals, while providing responsible entities with flexibility regarding how they fulfill the actions required.

Proposed FAC-001-2, Requirement R2

> **R2. Each applicable Generator Owner shall document Facility interconnection requirements and make them available upon request within 45 calendar days of full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.**

Proposed Requirement R2 of FAC-001-2 requires applicable Generator Owners with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility to document Facility interconnection requirements and to make them available upon request within 45 calendar days of full execution. This requirement is substantively identical to Requirement R2 of currently-effective Reliability Standard FAC-001-1. For example, the publishing of interconnection requirements has been replaced with the requirement to make interconnection requirements available upon request. This proposed change is designed to achieve the same reliability goal of ensuring that Facility interconnection requirements are public and available in a manner that provides more flexibility to entities regarding how to maintain (such as on a website) or provide such information.

Proposed FAC-001-2, Requirement R3

> **R3. Each Transmission Owner shall address the following items in its Facility interconnection requirements:**
>
> > **3.1. Procedures for coordinated studies of new or materially modified existing interconnections and their impacts on affected system(s).**
> > **3.2. Procedures for notifying those responsible for the reliability of affected system(s) of new or materially modified existing interconnections.**

Proposed Requirement R3 is applicable to Transmission Owners and requires Transmission Owners to include procedures for coordination and communication regarding new or materially modified existing interconnections.

The currently-effective Requirement R3 of FAC-001-1 requires entities to include additional elements in their interconnection procedures, such as breaker duty and surge protection, system protection and coordination, etc. These elements have been moved to the Guideline and Technical Basis section of the standard as some items included in Parts 3.1.3 through 3.1.16 are not applicable to all entities and this is not an exhaustive list. This proposed change is designed to provide entities with the flexibility to determine which Facility interconnection requirements are technically appropriate for their respective Facilities. The information included in the Guideline and Technical Basis section can be used as a starting point for each Transmission Owner to consider in the development of Facility interconnection requirements. The proposed changes to Requirement R3 are designed to achieve the same reliability goal of ensuring that entities specify their procedures for coordination and communication in their interconnection requirements, while providing entities with flexibility.

Proposed FAC-001-2, Requirement R4

> **R4. Each applicable Generator Owner shall address the following items in its Facility interconnection requirements:**
>
> > **4.1. Procedures for coordinated studies of new interconnections and their impacts on affected system(s).**
> > **4.2. Procedures for notifying those responsible for the reliability of affected system(s) of new interconnections.**

Proposed Requirement R4 of FAC-001-2 applies to applicable Generator Owners and requires Generator Owners to include procedures for coordination and communication regarding new or materially modified existing interconnections. Proposed Requirement R4 is identical to proposed Requirement R3 except for its applicability, and as such, the justification for Requirement R3 of FAC-001-2 applies with due weight to Requirement R4.

B. Reliability Standard FAC-002-2 –Facility Interconnection Studies

The purpose of FAC-002 is to study the impact of interconnecting new or materially modified Facilities on the Bulk Electric System. Proposed Reliability Standard FAC-002-2 consists of five requirements and is applicable to: Planning Coordinators; Transmission Planners; Transmission Owners; Distribution Providers; Generator Owners; applicable Generator Owners; and Load-Serving Entities. Applicable Generator Owners are Generator Owners with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission System. Proposed Requirement R5 applies to "applicable Generator Owners."

The currently-effective Reliability Standards FAC-002-1 consists of one requirement with five Parts. The proposed Reliability Standard FAC-002-2 consists of five requirements which clarifies the actions required of the applicable entities.

1. Procedural Background

Reliability Standard FAC-002-0 was accepted by the Commission in Order No. 693.[23] In response to a Commission directive in Order No. 693, the FAC-002-0 Reliability Standard was modified, and these modifications were accepted as FAC-002-1 in an order issued on January 10, 2011.[24] Requirement R2 of FAC-002-1 was approved for retirement by the Commission on November 21, 2013.[25]

2. Requirement-by-Requirement Justification

Proposed Requirement R1 requires Transmission Planners and Planning Coordinators to study the reliability impact of certain interconnections and sets forth a minimum criteria to be evaluated in Parts 1.1 through 1.4. Proposed Requirements R2 through R5 require the applicable entities to coordinate and cooperate in these studies and to provide the data described in Parts 1.1 through 1.4 of Requirement R1.

Proposed FAC-002-2, Requirement R1

> **R1. Each Transmission Planner and each Planning Coordinator shall study the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities. The following shall be studied:**
>
> **1.1. The reliability impact of the new interconnection, or materially modified existing interconnection, on affected system(s);**
>
> **1.2. Adherence to applicable NERC Reliability Standards; regional and Transmission Owner planning criteria; and Facility interconnection requirements;**
>
> **1.3. Steady-state, short-circuit, and dynamics studies, as necessary, to evaluate system performance under both normal and contingency conditions; and**

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[23] Order No. 693 at P 693.

[24] *North American Electric Reliability Corp*., 134 FERC ¶ 61,015 (2011).

[25] *See Electric Reliability Organization Proposal to Retire Requirements in Reliability Standards*, Order No. 788, 145 FERC ¶ 61,147 (2013).

1.4. Study assumptions, system performance, alternatives considered, and coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.

Proposed Requirement R1 is applicable to Transmission Planners and Planning Coordinators and requires the study of the reliability impact of interconnecting new Facilities. Parts 1.1 through 1.4 specify a minimum set of considerations that must be studied.

Proposed FAC-002-2, Requirement R2

R2. Each Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1, Parts 1.1-1.4.

Proposed Requirement R2 is applicable to Generator Owners and requires coordination and cooperation on studies with their Transmission Planner or Planning Coordinator when Generator Owners are seeking to interconnect new generation Facilities or to materially modify existing interconnections. Generator Owners must also provide, at a minimum, the data in Parts 1.1 through 1.4 of Requirement R1 of FAC-002-2.

Proposed FAC-002-2, Requirement R3

R3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1, Parts 1.1-1.4.

Proposed Requirement R3 is applicable to Transmission Owners, Distribution Providers and Load Serving Entities and requires coordination and cooperation on studies with their Transmission Planner or Planning Coordinator when Transmission Owners, Distribution

Providers and Load-Serving Entities are seeking to interconnect new transmission Facilities or to materially modify existing interconnections or end-user Facilities. Transmission Owners, Distribution Providers and Load-Serving Entities must also provide, at a minimum, the data in Parts 1.1 through 1.4 of Requirement R1 of FAC-002-2.

Proposed FAC-002-2, Requirement R4

> **R4. Each Transmission Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested new or materially modified interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts 1.1-1.4.**

Proposed Requirement R4 is applicable to Transmission Owners and requires coordination and cooperation regarding studies for new or materially modified interconnections to their Facilities. Transmission Owners must also provide, at a minimum, the data in Parts 1.1 through 1.4 of Requirement R1 of FAC-002-2.

Proposed FAC-002-2, Requirement R5

> **R5. Each applicable Generator Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts 1.1-1.4.**

Proposed Requirement R5 is applicable to Generator Owners and is parallel to Requirement R4. Proposed Requirement R5 requires Generator Owners to coordinate and cooperate regarding studies for new or materially modified interconnections to their Facilities. Generator Owners must also provide, at a minimum, the data in Parts 1.1 through 1.4 of Requirement R1 of FAC-002-2.

3. Commission Directives Addressed

In Order No. 693, the Commission directed NERC to consider a suggestion to include a reference to Reliability Standard TPL-004-0 in FAC-002.[26] The drafting team considered this suggestion and did not incorporate such a reference for several reasons. Reliability Standard TPL-004-0 has been superseded by Reliability Standard TPL-001-04. Further, the drafting team removed references to the TPL Reliability Standards to eliminate redundancy with Reliability Standard FAC-002-2, Requirement R1, Part 1.2, which requires entities to study adherence with all NERC Reliability Standards.

In Order No. 693, the Commission also directed NERC to consider the comments of various entities regarding suggestions to improve the wording and organization of Reliability Standard FAC-002-0. The drafting team considered these suggestions and this information is included in **Exhibit F**.

C. Enforceability of Proposed Reliability Standards FAC-001-2 and FAC-002-2

The proposed Reliability Standards include Violation Risk Factors ("VRFs") and Violation Severity Levels ("VSLs"). The VSLs provide guidance on the way that NERC will enforce the Requirements of the proposed Reliability Standards. The VRFs are one of several elements used to determine an appropriate sanction when the associated Requirement is violated. The VRFs assess the impact to reliability of violating a specific Requirement. The VRFs and VSLs for the proposed Reliability Standards comport with NERC and Commission guidelines related to their assignment. For a detailed review of the VRFs, the VSLs, and the analysis of how the VRFs and VSLs were determined using these guidelines, please see **Exhibit E**.

[26] Order No. 693 at P 692.

The proposed Reliability Standards also include Measures that support each Requirement by clearly identifying what is required and how the Requirement will be enforced. These Measures help ensure that the Requirements will be enforced in a clear, consistent, and non-preferential manner and without prejudice to any party.[27]

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

IV. CONCLUSION

For the reasons set forth above, NERC respectfully requests that the Commission:

- approve the proposed Reliability Standards and associated elements included in **Exhibit A,** effective as proposed herein;

- approve the implementation plan included in **Exhibit B** as proposed herein.

Respectfully submitted,

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Date: August 22, 2014

Exhibit A

Proposed Reliability Standards, FAC-001-2 and FAC-002-2

A. Introduction

1. **Title:** **Facility Interconnection Requirements**

2. **Number:** FAC-001-2

3. **Purpose:** To avoid adverse impacts on the reliability of the Bulk Electric System, Transmission Owners and applicable Generator Owners must document and make Facility interconnection requirements available so that entities seeking to interconnect will have the necessary information.

4. **Applicability:**

   4.1. Functional Entities:

   4.1.1 Transmission Owner

   4.1.2 Applicable Generator Owner

   4.1.2.1 Generator Owner with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.

5. **Effective Date:** The standard shall become effective on the first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

B. Requirements and Measures

R1. Each Transmission Owner shall document Facility interconnection requirements, update them as needed, and make them available upon request. Each Transmission Owner's Facility interconnection requirements shall address interconnection requirements for: *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*

1.1. generation Facilities;

1.2. transmission Facilities; and

1.3. end-user Facilities.

M1. Each Transmission Owner shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R1.

R2. Each applicable Generator Owner shall document Facility interconnection requirements and make them available upon request within 45 calendar days of full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is

used to interconnect to the Transmission system. *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*

M2. Each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R2.

R3. Each Transmission Owner shall address the following items in its Facility interconnection requirements: *[Violation Risk Factor: Lower] [Time Horizon: Long-Term Planning]*

3.1. Procedures for coordinated studies of new or materially modified existing interconnections and their impacts on affected system(s).

3.2. Procedures for notifying those responsible for the reliability of affected system(s) of new or materially modified existing interconnections.

M3. Each Transmission Owner shall have evidence (such as dated, documented Facility interconnection requirements addressing the procedures) that it met all requirements in Requirement R3.

R4. Each applicable Generator Owner shall address the following items in its Facility interconnection requirements: *[Violation Risk Factor: Lower] [Time Horizon: Long-Term Planning]*

4.1. Procedures for coordinated studies of new interconnections and their impacts on affected system(s).

4.2. Procedures for notifying those responsible for the reliability of affected system(s) of new interconnections.

M4. Each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements addressing the procedures) that it met all requirements in Requirement R4.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention

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

The Transmission Owner and applicable Generator Owner shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The responsible entities shall retain documentation as evidence for three years.

If a responsible entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audit

Self-Certification

Spot Check

Compliance Investigation

Self-Reporting

Complaint

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Lower	N/A	The Transmission Owner documented Facility interconnection requirements and updated them as needed, but failed to make them available upon request. OR The Transmission Owner documented Facility interconnection requirements and made them available upon request, but failed to update them as needed. OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but	The Transmission Owner documented Facility interconnection requirements, but failed to update them as needed and failed to make them available upon request. OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for two of the Facilities as specified in R1, Parts 1.1, 1.2, or 1.3.	The Transmission Owner did not document Facility interconnection requirements.

				failed to address interconnection requirements for one of the Facilities as specified in R1, Parts 1.1, 1.2, or 1.3.		
R2	Long-term Planning	Lower	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 45 calendar days but less than or equal to 60 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 60 calendar days but less than or equal to 70 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 70 calendar days but less than or equal to 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.

R3	Long-term Planning	Lower	N/A	N/A	The Transmission Owner addressed either R3, Part 3.1 or Part 3.2 in its Facility interconnection requirements, but did not address both.	The Transmission Owner addressed neither R3, Part 3.1 nor Part 3.2 in its Facility interconnection requirements.
R4	Long-term Planning	Lower	N/A	N/A	The applicable Generator Owner addressed either R4, Part 4.1 or Part 4.2 in its Facility interconnection requirements, but did not address both.	The applicable Generator Owner addressed neither R4, Part 4.1 nor Part 4.2 in its Facility interconnection requirements.

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Guidelines and Technical Basis

Entities should have documentation to support the technical rationale for determining whether an existing interconnection was "materially modified." Recognizing that what constitutes a "material modification" will vary from entity to entity, the intent is for this determination to be based on engineering judgment.

Requirement R3:

Originally the Parts of R3, with the exception of the first two bullets, which were added by the Project 2010-02 drafting team, this list has been moved to the Guidelines and Technical Basis section to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as Parts of R3 was deemed too prescriptive, as frequently some items in the list do not apply to all applicable entities – and some applicable entities will have requirements that are not included in this list.

Each Transmission Owner and applicable Generator Owner should consider the following items in the development of Facility interconnection requirements:

- Procedures for requesting a new Facility interconnection or material modification to an existing interconnection
- Data required to properly study the interconnection
- Voltage level and MW and MVAR capacity or demand at the point of interconnection
- Breaker duty and surge protection
- System protection and coordination
- Metering and telecommunications
- Grounding and safety issues
- Insulation and insulation coordination
- Voltage, Reactive Power (including specifications for minimum static and dynamic reactive power requirements), and power factor control
- Power quality impacts
- Equipment ratings
- Synchronizing of Facilities
- Maintenance coordination
- Operational issues (abnormal frequency and voltages)
- Inspection requirements for new or materially modified existing interconnections
- Communications and procedures during normal and emergency operating conditions

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
1		Added requirements for Generator Owner and brought overall standard format up to date.	Revision under Project 2010-07
1	February 9, 2012	Adopted by the Board of Trustees	
1	September 19, 2013	A FERC order was issued on September 19, 2013, approving FAC-001-1. This standard became enforceable on November 25, 2013 for Transmission Owners. For Generator Owners, the standard becomes enforceable on January 1, 2015.	
2		Revisions to implement the recommendations of the FAC Five-Year Review Team.	Revision under Project 2010-02
2	August 14, 2014	Adopted by the Board of Trustees	

FAC-002-2 Clean Version

A. Introduction

1. **Title:** **Facility Interconnection Studies**

2. **Number:** FAC-002-2

3. **Purpose:** To study the impact of interconnecting new or materially modified Facilities on the Bulk Electric System.

4. **Applicability:**

   4.1. Functional Entities:

   4.1.1 Planning Coordinator

   4.1.2 Transmission Planner

   4.1.3 Transmission Owner

   4.1.4 Distribution Provider

   4.1.5 Generator Owner

   4.1.6 Applicable Generator Owner

   4.1.6.1 Generator Owner with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.

   4.1.7 Load-Serving Entity

5. **Effective Date:** The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

B. Requirements and Measures

R1. Each Transmission Planner and each Planning Coordinator shall study the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities. The following shall be studied: *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

1.1. The reliability impact of the new interconnection, or materially modified existing interconnection, on affected system(s);

1.2. Adherence to applicable NERC Reliability Standards; regional and Transmission Owner planning criteria; and Facility interconnection requirements;

1.3. Steady-state, short-circuit, and dynamics studies, as necessary, to evaluate system performance under both normal and contingency conditions; and

1.4. Study assumptions, system performance, alternatives considered, and coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.

M1. Each Transmission Planner or each Planning Coordinator shall have evidence (such as study reports, including documentation of reliability issues) that it met all requirements in Requirement R1.

R2. Each Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M2. Each Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R2.

R3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R3.

R4. Each Transmission Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested new or materially modified interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M4. Each Transmission Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R4.

R5. Each applicable Generator Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M5. Each applicable Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R5.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention

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

The Planning Coordinator, Transmission Planner, Transmission Owner, Distribution Provider, Generator Owner, applicable Generator Owner, and Load-Serving Entity shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The responsible entities shall retain documentation as evidence for three years.

If a responsible entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audit

Self-Certification

Spot Check

Compliance Investigation

Self-Reporting

Complaint

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Medium	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities, but failed to study one of the Parts (R1, 1.1-1.4).	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities but failed to study two of the Parts (R1, 1.1-1.4).	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities but failed to study three of the Parts (R1, 1.1-1.4).	The Transmission Planner or Planning Coordinator failed to study the reliability impact of: interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of, generation, transmission, or electricity end-user Facilities.
R2	Long-term Planning	Medium	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, failed to coordinate and cooperate on

			with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).	with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).	with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).	studies with its Transmission Planner or Planning Coordinator.
R3	Long-term Planning	Medium	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.

R4	Long-term Planning	Medium	The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).	The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).	The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).	The Transmission Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities.
R5	Long-term Planning	Medium	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).	The applicable Generator Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities.

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None

Guidelines and Technical Basis

Entities should have documentation to support the technical rationale for determining whether an existing interconnection was "materially modified." Recognizing that what constitutes a "material modification" will vary from entity to entity, the intent is for this determination to be based on engineering judgment.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	January 13, 2006	Removed duplication of "Regional Reliability Organizations(s).	Errata
1	August 5, 2010	Modified to address Order No. 693 Directives contained in paragraph 693. Adopted by the NERC Board of Trustees.	Revised
1	February 7, 2013	R2 and associated elements approved by NERC Board of Trustees for retirement as part of the Paragraph 81 project (Project 2013-02) pending applicable regulatory approval.	
1	November 21, 2013	R2 and associated elements approved by FERC for retirement as part of the Paragraph 81 project (Project 2013-02)	
2		Revisions to implement the recommendations of the FAC Five-Year Review Team.	Revision under Project 2010-02
2	August 14, 2014	Adopted by the Board of Trustees.	

Exhibit B

Implementation Plan

Implementation Plan

Project 2010-02 – Connecting New Facilities to the Grid

Requested Approvals

- FAC-001-2 – Facility Interconnection Requirements
- FAC-002-2 – Facility Interconnection Studies

Requested Retirements

- FAC-001-1 – Facility Connection Requirements
- FAC-002-1 – Coordination of Plans for New Generation, Transmission, and End-User Facilities

Prerequisite Approvals

There are no other standards that must receive approval prior to the approval of these standards.

Revisions to Defined Terms in the NERC Glossary

There are no revisions to defined terms associated with these standards.

Background

Project 2010-02 Connecting New Facilities to the Grid is implementing the recommendations that the FAC Five-Year Review Team made with respect to FAC-001 and FAC-002. The changes are largely focused on adding clarity, removing redundancy, retiring requirements with no impact on the reliable operation of the Bulk Electric System, and bringing compliance elements in accordance with NERC guidelines.

The changes should not require significant change in practice for entities, but acknowledging that some entities have lengthy approval processes for (inter)connection handbook or procedure revisions, one year was deemed reasonable for all applicable entities to implement the standards, including revisions to internal documents or procedures.

Applicable Entities

- Planning Coordinator (FAC-002-2)
- Transmission Planner (FAC-002-2)
- Transmission Owner (FAC-001-2 and FAC-002-2)
- Distribution Provider (FAC-002-2)
- Generator Owner (FAC-002-2)
- Applicable Generator Owner: Generator Owner with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems. (FAC-001-2 and FAC-002-2)
- Load-Serving Entity

Effective Date

Both FAC-001-2 and FAC-002-2 shall become effective as follows:

The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

Retirements

FAC-001-1 and FAC-002-1 shall be retired at midnight of the day immediately prior to the effective date of FAC-001-2 and FAC-002-2 in the particular jurisdiction in which the new standard is becoming effective.

Exhibit C

Order No. 672 Criteria for FAC-001-2 and FAC-002-2

Exhibit C

Order No. 672 Criteria

In Order No. 672,[1] the Commission identified a number of criteria it will use to analyze Reliability Standards proposed for approval to ensure they are just, reasonable, not unduly discriminatory or preferential, and in the public interest. The discussion below identifies these factors and explains how the proposed Reliability Standard has met or exceeded the criteria.

1. Proposed Reliability Standards must be designed to achieve a specified reliability goal and must contain a technically sound means to achieve that goal.[2]

The proposed Reliability Standards achieve specific reliability goals via sound methods. Proposed Reliability Standard FAC-001-2 is designed to avoid adverse impacts on the reliability of the Bulk Electric System by requiring Transmission Owners and applicable Generator Owners to document and make Facility interconnection requirements available so that entities seeking to interconnect will have the required information. Proposed Reliability Standard FAC-002-2 is designed to study the impact of interconnecting new or materially modified Facilities on the Bulk

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[1] *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

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

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

Electric System. These reliability objectives are also consistent with Commission precedent regarding the need for standardized procedures for interconnecting generators.[3]

2. Proposed Reliability Standards must be applicable only to users, owners and operators of the bulk power system, and must be clear and unambiguous as to what is required and who is required to comply.[4]

Proposed Reliability Standard FAC-001-2, applies to Transmission Owners and Applicable Generator Owners and is clear and unambiguous as to what is required and who is required to comply, in accordance with Order No. 672. An Applicable Generator Owners is a "Generator Owner with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system." The requirements clearly state who is required to comply with the standard.

Proposed Reliability Standard FAC-002-2 applies to Planning Coordinators, Transmission Planners, Transmission Owners, Distribution Providers, Generator Owners, Applicable Generator Owners and Load-Serving Entities and is clear and unambiguous as to what is required and who is required to comply, in accordance with Order No. 672. An Applicable Generator Owner is a "Generator Owner with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator

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[3] *See Standardization of Generator Interconnection Agreements and Procedures,* Order No. 2003, FERC Stats. & Regs. ¶ 31,146 (2003), *order on reh'g,* Order 2003-A, FERC Stats. & Regs. ¶ 31,160 (2004), *order on reh'g,* Order No. 2003-B, FERC Stats. & Regs. ¶ 31,171 (2004), *order on reh'g,* Order No. 2003-C, FERC Stats. & Regs. ¶ 31,190 (2005), *affirmed sub. nom. Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC,* 475 F.3d 1277 (D.C. Cir. 2007).

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

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

Owner's existing Facility that is used to interconnect to the Transmission system." The requirements clearly state who is required to comply with the standard.

3. A proposed Reliability Standard must include clear and understandable consequences and a range of penalties (monetary and/or non-monetary) for a violation.[5]

The VRFs and VSLs for each of the proposed standards comport with NERC and Commission guidelines related to their assignment. The assignment of the severity level for each VSL is consistent with the corresponding Requirement and the VSLs should ensure uniformity and consistency in the determination of penalties. The VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations. For these reasons, the proposed Reliability Standards include clear and understandable consequences in accordance with Order No. 672.

4. A proposed Reliability Standard must identify clear and objective criterion or measure for compliance, so that it can be enforced in a consistent and non preferential manner. [6]

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

5. Proposed Reliability Standards should achieve a reliability goal effectively and efficiently — but do not necessarily have to reflect "best practices" without regard

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

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

to implementation cost or historical regional infrastructure design.[7]

The proposed Reliability Standards achieve the reliability goals effectively and efficiently in accordance with Order No. 672. The proposed Reliability Standards improve reliability by ensuring that there is appropriate coordination and communication regarding the interconnection of Facilities.

6. Proposed Reliability Standards cannot be "lowest common denominator," i.e., cannot reflect a compromise that does not adequately protect Bulk-Power System reliability. Proposed Reliability Standards can consider costs to implement for smaller entities, but not at consequences of less than excellence in operating system reliability.[8]

The proposed Reliability Standards do not reflect a "lowest common denominator" approach. To the contrary, the proposed Standards represent a significant improvement over the previous versions as described herein.

7. Proposed Reliability Standards must be designed to apply throughout North America to the maximum extent achievable with a single Reliability Standard while not favoring one geographic area or regional model. It should take into account regional variations in the organization and corporate structures of transmission owners and operators, variations in generation fuel type and ownership patterns, and regional variations in market design if these affect the proposed Reliability Standard.[9]

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

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

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

[9] Order No. 672 at P 331. A proposed Reliability Standard should be designed to apply throughout the interconnected North American Bulk-Power System, to the maximum extent this is achievable with a single Reliability Standard. The proposed Reliability Standard should not be based on a single geographic or regional model but should take into account geographic variations in grid characteristics, terrain, weather, and other such factors; it should also take into account regional variations in the organizational and corporate structures of

The proposed Reliability Standards apply throughout North America and do not favor one geographic area or regional model.

8. Proposed Reliability Standards should cause no undue negative effect on competition or restriction of the grid beyond any restriction necessary for reliability.[10]

The proposed Reliability Standards do not restrict the available transmission capability or limit use of the Bulk-Power System in a preferential manner.

9. The implementation time for the proposed Reliability Standard is reasonable.[11]

The proposed effective dates for the proposed Reliability Standards are just and reasonable and appropriately balance the urgency in the need to implement the standards against the reasonableness of the time allowed for those who must comply to develop necessary procedures, software, facilities, staffing or other relevant capability. The changes should not require significant change in practice for entities, but acknowledging that some entities have lengthy approval processes for (inter)connection handbook or procedure revisions, one year was deemed reasonable for all applicable entities to implement the standards, including revisions to internal documents or procedures. This will allow applicable entities adequate time to ensure compliance with the requirements. The proposed effective dates are explained in the proposed Implementation Plan, attached as **Exhibit B**.

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transmission owners and operators, variations in generation fuel type and ownership patterns, and regional variations in market design if these affect the proposed Reliability Standard.

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

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

10. The Reliability Standard was developed in an open and fair manner and in accordance with the Commission-approved Reliability Standard development process.[12]

The proposed Reliability Standards were developed in accordance with NERC's Commission-approved, ANSI- accredited processes for developing and approving Reliability Standards. **Exhibit G** includes a summary of the Reliability Standard development proceedings, and details the processes followed to develop the standard.

These processes included, among other things, multiple comment periods, pre-ballot review periods, and balloting periods. Additionally, all meetings of the drafting team were properly noticed and open to the public. The initial and recirculation ballots both achieved a quorum and exceeded the required ballot pool approval levels.

11. NERC must explain any balancing of vital public interests in the development of proposed Reliability Standards.[13]

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

12. Proposed Reliability Standards must consider any other appropriate factors.[14]

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

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

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

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

Exhibit D

Mapping Document

Project 2010-02 – Connecting New Facilities to the Grid

Mapping Document

Proposed New Standards

- FAC-001-2 – Facility Interconnection Requirements
- FAC-002-2 – Facility Interconnection Studies

Proposed Retirements

- FAC-001-1 – Facility Connection Requirements
- FAC-002-1 – Coordination of Plans for New Generation, Transmission, and End-User Facilities

Background

Project 2010-02 Connecting New Facilities to the Grid is implementing the recommendations that the FAC Five-Year Review Team made with respect to FAC-001 and FAC-002. The changes are largely focused on adding clarity, removing redundancy, retiring requirements with no impact on the reliable operation of the Bulk Electric System, and bringing compliance elements in accordance with NERC guidelines.

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
R1. The Transmission Owner shall document, maintain, and publish Facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements. The Transmission	FAC-001-2, R1	R1 was revised in under FAC-001-2 to remove elements that are redundant with FAC-002 and clarify the actions required.

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
Owner's Facility connection requirements shall address connection requirements for: **R1.1.** Generation Facilities, **R1.2.** Transmission Facilities, and **R1.3.** End-user Facilities		
R2. Each applicable Generator Owner shall, within 45 days of having an executed Agreement to evaluate the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems (under FAC-002-1), document and publish its Facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements.	FAC-001-2, R2	R2 was revised in under FAC-001-2 to remove elements that are redundant with FAC-002 and clarify the actions required.
R3. Each Transmission Owner and each applicable Generator Owner (in accordance with Requirement R2) shall address the following items in its Facility connection requirements: **R3.1.** Provide a written summary of its plans to achieve the required system performance as	R3 was separated into two requirements, R3 (for Transmission Owners) and R4 (for Generator	The SDT wants to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as Parts of R3 and R4 was deemed too prescriptive, as frequently some items in the list will not apply to all applicable entities – and some applicable

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
described in Requirements R1 or R2 throughout the planning horizon: **R3.1.1.** Procedures for coordinated joint studies of new Facilities and their impacts on the interconnected Transmission systems. **R3.1.2.** Procedures for notification of new or modified Facilities to others (those responsible for the reliability of the interconnected Transmission systems) as soon as feasible. **R3.1.3.** Voltage level and MW and MVAR capacity or demand at point of connection. **R3.1.4.** Breaker duty and surge protection. **R3.1.5.** System protection and coordination. **R3.1.6.** Metering and telecommunications. **R3.1.7.** Grounding and safety issues. **R3.1.8.** Insulation and insulation	Owners). R3, 3.1.1, and 3.1.2 have been retained in R3 and R4 of FAC-001-2. The remaining Parts have been transferred to the Guidelines and Technical Basis section of FAC-001-2.	entities will have requirements that are not included in the list. The Guidelines should be used as a starting point for each Transmission Owner and applicable Generator Owner to consider in the development of Facility interconnection requirements. Applicable Generator Owners were previously included in R3, but have been separated into a different requirement to make clearer that applicable Generator Owners need not be concerned with addressing materially modified existing interconnections. Otherwise, the requirements for both Transmission Owners and applicable Generator Owners remain exactly the same.

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
coordination. **R3.1.9.** Voltage, Reactive Power, and power factor control. **R3.1.10.** Power quality impacts. **R3.1.11.** Equipment Ratings. **R3.1.12.** Synchronizing of Facilities. **R3.1.13.** Maintenance coordination. **R3.1.14.** Operational issues (abnormal frequency and voltages). **R3.1.15.** Inspection requirements for existing or new Facilities. **R3.1.16.** Communications and procedures during normal and emergency operating conditions.		
R4. The Transmission Owner shall maintain and update its Facility connection requirements as required. The Transmission Owner shall make documentation of these requirements available to the users of the transmission system, the Regional Entity, and ERO on request (five business days).	Retired	The requirement to maintain and update Facility connection requirements in Requirement R4 is contained in Requirement R1's proposed new language to "document, update as needed, and make available upon request." The second sentence of the current Requirement R4, which requires Transmission Owners to make documentation available, is redundant with the recommended changes to R1 and R2 under FAC-001-2.

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
		Further, requests to share data or information to Regional Entities and the ERO upon request are already addressed in Section 1600 of NERC's Rules of Procedure.

Standard: FAC-002		
Requirement in Approved Standard (FAC-002-1)	**Translation to New Standard or Other Action**	**Comments**
R1. The Generator Owner, Transmission Owner, Distribution Provider, and Load-Serving Entity seeking to integrate generation facilities, transmission facilities, and electricity end-user facilities shall each coordinate and cooperate on its assessments with its Transmission Planner and Planning Authority. The assessment shall include: **R1.1.** Evaluation of the reliability impact of the new facilities and their connections on the interconnected transmission systems. **R1.2.** Ensurance of compliance with NERC Reliability Standards and applicable Regional, subregional, Power Pool, and individual system	FAC-002-2 R1, R2, R3, and R4	R1 was separated into five requirements to add clarity and better distinguish the actions required of the applicable entities and revised the Parts to remove elements that are more appropriate for Measures, resulting in four Parts in FAC-002-2 rather than five. FAC-002-1, R1, Parts 1.1, 1.2, 1.4, and 1.5 have largely been retained in FAC-002-2, R1, Parts 1.1, 1.2, 1.3, and 1.4. The first sentence of FAC-002-1, R1, Part 1.3 was deleted, and the second sentence was merged with the content of the new FAC-002-2, R1, Part 1.4.

Standard: FAC-002		
Requirement in Approved Standard (FAC-002-1)	**Translation to New Standard or Other Action**	**Comments**
planning criteria and facility connection requirements. **R1.3.** Evidence that the parties involved in the assessment have coordinated and cooperated on the assessment of the reliability impacts of new facilities on the interconnected transmission systems. While these studies may be performed independently, the results shall be jointly evaluated and coordinated by the entities involved. **R1.4.** Evidence that the assessment included steady-state, short-circuit, and dynamics studies as necessary to evaluate system performance under both normal and contingency conditions in accordance with Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0. **R1.5.** Documentation that the assessment included study assumptions, system performance, alternatives considered, and jointly coordinated recommendations.		
R2. The Planning Authority, Transmission Planner,	Retired	FAC-002-1, R2 has been deleted in the current version of

Standard: FAC-002		
Requirement in Approved Standard (FAC-002-1)	**Translation to New Standard or Other Action**	**Comments**
Generator Owner, Transmission Owner, Load-Serving Entity, and Distribution Provider shall each retain its documentation (of its evaluation of the reliability impact of the new facilities and their connections on the interconnected transmission systems) for three years and shall provide the documentation to the Regional Reliability Organization(s) and NERC on request (within 30 calendar days). (Retirement approved by FERC effective January 21, 2014.)		FAC-002 because it was approved by FERC for retirement effective January 21, 2014.

Exhibit E

Analysis of Violation Risk Factors and Violation Security Levels

Project 2010-02: Connecting New Facilities to the Grid

VRF and VSL Justifications for FAC-001-2 and FAC-002-2

VRF and VSL Justifications – FAC-001-2, R1	
Proposed VRF	Lower
NERC VRF Discussion	While necessary for reliability, the requirements in FAC-001 are administrative in nature and take place in the planning horizon. A violation of FAC-001, R1 would not be expected to adversely affect the electrical state or capability of the Bulk Electric System or the ability to effectively monitor, control, or restore the Bulk Electric System.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* R3 of FAC-003-2, which requires documented maintenance strategies or procedures or processes or specifications and takes place in the planning horizon, is also assigned a Lower VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the obligations that are co-mingled in the requirement have equal reliability risk objectives.
Proposed Lower VSL	N/A
Proposed Moderate VSL	The Transmission Owner documented Facility interconnection requirements and updated them as needed, but failed to make them available upon request. OR The Transmission Owner documented Facility interconnection requirements and made them available upon request, but failed to update them as needed. OR

VRF and VSL Justifications – FAC-001-2, R1	
	The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for one of the Facilities as specified in R1, Parts 1.1, 1.2, or 1.3.
Proposed High VSL	The Transmission Owner documented Facility interconnection requirements, but failed to update them as needed and failed to make them available upon request. OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for two of the Facilities as specified in R1, Parts 1.1, 1.2, or 1.3.
Proposed Severe VSL	The Transmission Owner did not document Facility interconnection requirements.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.

VRF and VSL Justifications – FAC-001-2, R1	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-001-2, R2	
Proposed VRF	Lower
NERC VRF Discussion	While necessary for reliability, the requirements in FAC-001 are administrative in nature and take place in the planning horizon. A violation of FAC-001, R2 would not be expected to adversely affect the electrical state or capability of the Bulk Electric System or the ability to effectively monitor, control, or restore the Bulk Electric System.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* R3 of FAC-003-2, which requires documented maintenance strategies or procedures or processes or specifications and takes place in the planning horizon, is also assigned a Lower VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See “NERC VRF Discussion” above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the obligations that are co-mingled in the requirement have equal reliability risk objectives.
Proposed Lower VSL	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 45 calendar days but less than or equal to 60 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the Transmission system.
Proposed Moderate VSL	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 60 calendar days but less than or equal to 70 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the Transmission system.

VRF and VSL Justifications – FAC-001-2, R2	
Proposed High VSL	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 70 calendar days but less than or equal to 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.
Proposed Severe VSL	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.

VRF and VSL Justifications – FAC-001-2, R2	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-001-2, R3	
Proposed VRF	Lower
NERC VRF Discussion	While necessary for reliability, the requirements in FAC-001 are administrative in nature and take place in the planning horizon. A violation of FAC-001, R3 would not be expected to adversely affect the electrical state or capability of the Bulk Electric System or the ability to effectively monitor, control, or restore the Bulk Electric System.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* R3 of FAC-003-2, which requires documented maintenance strategies or procedures or processes or specifications and takes place in the planning horizon, is also assigned a Lower VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See “NERC VRF Discussion” above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the obligations that are co-mingled in the requirement have equal reliability risk objectives.
Proposed Lower VSL	N/A
Proposed Moderate VSL	N/A
Proposed High VSL	The Transmission Owner addressed either R3, Part 3.1 or Part 3.2 in its Facility interconnection requirements, but did not address both.
Proposed Severe VSL	The Transmission Owner addressed neither R3 Part 3.1 nor Part 3.2 in its Facility interconnection requirements.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.

VRF and VSL Justifications – FAC-001-2, R3	
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-001-2, R4	
Proposed VRF	Lower
NERC VRF Discussion	While necessary for reliability, the requirements in FAC-001 are administrative in nature and take place in the planning horizon. A violation of FAC-001, R4 would not be expected to adversely affect the electrical state or capability of the Bulk Electric System or the

VRF and VSL Justifications – FAC-001-2, R4	
	ability to effectively monitor, control, or restore the Bulk Electric System.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* R3 of FAC-003-2, which requires documented maintenance strategies or procedures or processes or specifications and takes place in the planning horizon, is also assigned a Lower VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the obligations that are co-mingled in the requirement have equal reliability risk objectives.
Proposed Lower VSL	N/A
Proposed Moderate VSL	N/A
Proposed High VSL	The applicable Generator Owner addressed either R4, Part 4.1 or Part 4.2 in its Facility interconnection requirements, but did not address both.
Proposed Severe VSL	The applicable Generator Owner addressed neither R4, Part 4.1 nor Part 4.2 in its Facility interconnection requirements.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.

VRF and VSL Justifications – FAC-001-2, R4	
in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R1	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly study the reliability impact of interconnecting new Facilities or materially modifying existing interconnections, and the other entities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities, but failed to study one of the Parts (R1, 1.1-1.4).
Proposed Moderate VSL	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities but failed to study two of the Parts (R1, 1.1-1.4).
Proposed High VSL	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission,

VRF and VSL Justifications – FAC-002-2, R1	
	or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities but failed to study three of the Parts (R1, 1.1-1.4).
Proposed Severe VSL	The Transmission Planner or Planning Coordinator failed to study the reliability impact of: interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of, generation, transmission, or electricity end-user Facilities.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.

VRF and VSL Justifications – FAC-002-2, R1	
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R2	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly study the reliability impact of interconnecting new Facilities or materially modifying existing interconnections, and the other entities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).
Proposed Moderate VSL	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).

VRF and VSL Justifications – FAC-002-2, R2	
Proposed High VSL	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).
Proposed Severe VSL	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.
FERC VSL G3 Violation Severity Level Assignment Should Be	The language of the VSL directly mirrors the language in the corresponding requirement.

VRF and VSL Justifications – FAC-002-2, R2	
Consistent with the Corresponding Requirement	
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R3	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly study the reliability impact of interconnecting new Facilities or materially modifying existing interconnections, and the other entities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).
Proposed Moderate VSL	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning

VRF and VSL Justifications – FAC-002-2, R3	
	Coordinator, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).
Proposed High VSL	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).
Proposed Severe VSL	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.

VRF and VSL Justifications – FAC-002-2, R3	
Should Not Contain Ambiguous Language	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R4	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly study the reliability impact of interconnecting new Facilities or materially modifying existing interconnections, and the other entities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).
Proposed Moderate VSL	The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).
Proposed High VSL	The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested

VRF and VSL Justifications – FAC-002-2, R4	
	new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).
Proposed Severe VSL	The Transmission Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R4	
Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	

VRF and VSL Justifications – FAC-002-2, R5	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly study the reliability impact of interconnecting new Facilities or materially modifying existing interconnections, and the other entities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to

VRF and VSL Justifications – FAC-002-2, R5	
	provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).
Proposed Moderate VSL	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).
Proposed High VSL	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).
Proposed Severe VSL	The applicable Generator Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.

VRF and VSL Justifications – FAC-002-2, R5	
Should Not Contain Ambiguous Language	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

Exhibit F

Consideration of Issues and Directives

Consideration of Issues and Directives

Project 2010-02 – Connecting New Facilities to the Grid

Project 2010-02 – Connecting New Facilities to the Grid is implementing the recommendations that the FAC Five-Year Review Team (FYRT) made with respect to FAC-001-1 and FAC-002-1. The Standard Drafting Team (SDT) has proposed changes to add clarity, remove redundancy, retire requirements with no impact on the reliable operation of the Bulk Electric System, and bring compliance elements in accordance with NERC guidelines. Along with considering stakeholder comments as it proposed changes (see the Consideration of Comments form), the SDT considered Order No. 693 directives related to FAC-002-0, the recommendations of the Independent Experts Review Project, Phase 1 Paragraph 81 suggestions, and the recommendations of the Integration of Variable Generation Task Force

FERC Directives

There are two outstanding directives from FERC Order No. 693[1] that apply to FAC-002-0. The first directs NERC to consider incorporating a reference to TPL-004-0 in FAC-002-0.[2] The SDT considered this suggestion and has found that this directive is outdated. FERC has approved TPL-001-4 and it will become enforceable on January 1, 2015. Further, the SDT has deleted any reference to the TPL Reliability Standards because the reference is redundant with the FAC-002-2, R1, Part 1.2 requirement to study adherence with all NERC Reliability Standards. To continue including a separate reference to the TPL Reliability Standards is redundant and could lead to multiple violations for the same action.

The second outstanding directive related to FAC-002-0 asked NERC to consider the comments of various entities asking for clarification of R1.[3] For ease of review, the Project 2010-02 SDT has summarized the comments of the various entities below, along with its response to those comments.

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[1] FERC Order No. 693, which approved 83 Reliability Standards as mandatory and effective, is available here: http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/ORDER%20693.pdf.
[2] Order No. 693 at P 692 ("With respect to FirstEnergy's suggestion to also include a reference to Reliability Standard TPL-004-0, we direct the ERO to consider it through the Reliability Standards development process.").
[3] Order No. 693 at P 687.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
All of the above commenters request clarification of Requirement R1 in the Reliability Standard that states that various functional entities "shall each coordinate and cooperate on its assessments with its transmission planner and planning authority." The Commission believes that all entities listed in the Applicability section have a stake in the performance of the system and should have the opportunity to provide input in the assessment under R1. The Commission believes that commenters have raised valid concerns that, if addressed, would make the Reliability Standard better. The wording would allow a number of organizational approaches to achieving the goal of performing an analysis. The Commission does not intend to limit which organizational approach is used by the entities, only to assure that a single competent and collaborative analysis is performed. Therefore, the Commission directs the ERO to address these concerns in the Reliability Standards development process.	FERC Order No. 693 at P 687	The SDT has addressed the concerns through the standard development process and responses are included below.
APPA requested that the Reliability Standard be clarified to state that the required assessment must be performed only by the Transmission Planner and the Planning Authority. Related, TAPS expressed concern that Load-Serving Entities are not equipped to perform assessments. California Cogeneration expressed a similar	FERC Order No. 693 at P 683 and 685	The SDT is addressing these concerns by separating R1 into five requirements that better clarify the responsibilities of all entities involved. The new R1 focuses exclusively on the Transmission Planner and Planning Coordinator's responsibility for conducting studies, and the new R2, R3, R4, and R5 separate out the requirement for Generator Owners, Transmission

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
concern about Generator Owners' ability to perform an assessment.		Owners, Distribution Providers, Load-Serving Entities, and applicable Generator Owners to simply coordinate and cooperate on those studies.
Xcel requested that the Commission clarify that only one required assessment needs to be done when new facilities are added, and that all the listed entities should participate in that single assessment.	FERC Order No. 693 at P 683	The SDT agrees that it is possible that only one set of studies may be necessary, and in that case all entities could simply participate and sign on to the same set of studies, but in other cases, multiple sets of studies might be conducted and later coordinated.
FirstEnergy requested that NERC clarify what is considered a new facility and asks if, for example, up-rates should be included as new facilities.	FERC Order No. 693 at P 684	The SDT believes the determination of whether an up-rate needs to be assessed the same way as a new Facility is up to the entity that is conducting the study, and that such decisions will vary by region. It has added language to the Guidelines and Technical Basis section of the standard clarifying that entities should have documentation to support the technical rationale for determining whether an existing interconnection was "materially modified."
Six Cities requested that this Reliability Standard clarify that all applicable entities must make available data necessary for all other responsible entities to perform the required assessment.	FERC Order No. 693 at P 685	The SDT believes that the requirement to coordinate and cooperate requires the sharing of all data necessary for conducting a study. The SDT has modified the language of the proposed R2-R4 to add detail ("including but not limited to the provision of data") to clarify.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
Six Cities also suggested that the transmission operator be added as an entity to which this Reliability Standard is applicable, at least from the perspective that it make necessary data available to all other entities responsible for assessment.	FERC Order No. 693 at P 685	The SDT believes that data from the Transmission Owner would account for the necessary data from the transmission side. It would be the responsibility of the Transmission Planner or Planning Coordinator to include any relevant operations data.
FirstEnergy stated that both MISO and PJM already have Large Generator Interconnection Procedures (LGIP) in place that provide a formal process that meets the requirements listed under R1, and asks that the Commission state that complying with the interconnection agreement and/or OATT satisfies this requirement.	FERC Order No. 693 at P 686	The SDT points out that regardless of what is covered in a tariff, requirements for interconnecting new Facilities still need to be addressed in NERC's Reliability Standards. The requirement for Open Access Transmission Tariffs varies from region to region. FERC handles market-related documents like tariffs differently from reliability-related documents like standards, and reliability standards should not rely upon market-related documents to address reliability issues.

Independent Expert Review Project Recommendations

In the Final Report[4] and Requirements Scoring Spreadsheet[5], the Standards Independent Experts Review Project (IERP) continued to support the reliability need for both FAC-001 and FAC-002. The SDT implemented the majority of the IERP's recommendations, but is proposing some changes that are different from the IERP recommendations in some cases where industry expertise and consensus suggested a different solution.

[4] The Standards Independent Experts Review Project – Final Report is available here: http://www.nerc.com/pa/Stand/Standards%20Development%20Plan%20Library/Standards_Independent_Experts_Review_Project_Report.pdf.

[5] The Standards Independent Experts Review Project – Requirements Scoring Spreadsheet is available here: http://www.nerc.com/pa/Stand/Standards%20Development%20Plan%20Library/Standards_IERP_Requirements_Spreadsheet_August_29_2013.xls.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
FAC-001-1, R1: Word published is not clear	IERP	The SDT has changed requirement to "publish" be changed to "make available upon request."
FAC-001-1, R1 and R2: Team had long discussion on the fact that FAC-001 requires the TO to publish the Facility connection requirements, but it does not put a requirement on anyone wanting to interconnect to meet the requirements in the Facility connection requirements. NERC should work with industry to see if an enforcement on entities wanting to interconnect should be added to the NERC standards.	IERP	The SDT does not believe such a change is necessary. FAC-002-1, R1 Part 1.2 requires that studies of the impact of interconnecting new Facilities or materially modifying existing interconnections include consideration of adherence with NERC Reliability Standards; applicable regional and Transmission Owner planning criteria; and *Facility interconnection requirements.*
FAC-001-1, R3: R3: Streamline the items in 3.1 by removing- 3.1.1, 3.1.2, 3.1.3, 3.1.9, 3.1.11, 3.1.13, 3.1.15, 3.1.16	IERP	The SDT believes that all Parts except R3, Part 3.1.1 and R3, Part 3.1.2 are too prescriptive to include in a standard and has recommended retaining the Parts but moving them to a Guidelines and Technical Basis section.
FAC-001-1, R4: Administrative; should be deleted	IERP	The SDT agrees and has proposed deleting the original R4.
FAC-002-1, R1: Merge 1.1 and 1.4; retire 1.2, 1.3 and 1.5. The new 1.1 and 1.4 should say 'the assessment shall address requirements as identified in the FCR and the performance requirements as identified in the TPL stds."interconnection agreement and/or OATT satisfies this requirement.	IERP	Though the SDT does not agree with the specific recommendations of the IERP, the team agrees that there is room for improvement in the Parts of R1. The SDT has proposed modifications to the original R1, Parts 1.1-R1.5 for consistency and added clarity. The SDT recommends the original R1, Part 1.3 be deleted and R1, Part 1.5 modified to focus less on documentation and more on the content of the assessment.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
		The SDT has also removed the reference to TPL standards because it was redundant with the reference to all NERC Reliability Standards in R1, Part 1.2.
FAC-002-1, R1: "…applicable Regional requirements" language is not clear	IERP	The SDT believes that the list of standards and criteria that studies must consider catalogs some of the elements that must be considered in studies of a new interconnection. Some regions have specific requirements that may inform Facility interconnection requirements, and those should be considered.
FAC-001-1 and FAC-002-1: The IERP suggested a new construct be adopted by the ERO for NERC Reliability Standards. Under this construct, FAC-001 and FAC-002 would be combined with TPL-001, MOD-010, MOD-012, MOD-025, MOD-026, and MOD-027 to "Assess Transmission Future Needs and Develop Transmission Expansion Plans - Not Operational Planning." Has the Five Year Review Team considered this construct?	IERP	While the SDT supports this general direction, transition to this new framework is premature and would need to be carefully coordinated across a variety of projects.

Paragraph 81 Phase 1 Recommendations

During Phase 1 of the Paragraph 81 (P81) process, stakeholder were asked to make suggestions about future candidates for P81 retirement. Below, the standard drafting team (SDT) addresses the stakeholder suggestions from P81 Phase 1 that related to FAC-001 and FAC-002. Note that duplicate suggestions have been consolidated.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
FAC-001-0, R1 and R2: Retire R1 and R2; they relate to documentation	P81	While the SDT agrees that many documentation requirements are not related to reliability, the team believes that FAC-001 is about more than documentation; it requires the *establishment* of Facility interconnection requirements. The development and documentation of these Facility interconnection requirements facilitates the studies that take place in FAC-002. Although Facility interconnection requirements for public utilities are typically covered in Open Access Transmission Tariffs (OATTs) under Sections 205 and 206 of the Federal Power Act, this leaves out electric utilities such as municipalities, cooperatives, and federal entities (e.g., the Bonneville Power Administration and the Tennessee Valley Authority), which are addressed under Section 215 of the Federal Power Act. OATTs also would not apply to non-jurisdictional entities that fall in NERC's footprint (e.g., Canadian entities). Ultimately, the SDT agreed that Facility interconnection requirements are necessary for reliability and should continue to be explicitly addressed in NERC standards.
FAC-002-1, R1: R1 assigns responsibility to the wrong functional entity	P81	The SDT believes this concern is addressed by separating R1 into five requirements that better clarify the responsibilities of all entities involved.

Integration of Variable Generation Task Force Recommendations

The Integration of Variable Generation Task Force (IVGTF), a task force under the Planning Committee, was asked to make recommendations for how NERC interconnection procedures and standards should be enhanced to address voltage and frequency ride-through, reactive and real power control, and frequency/inertial response criteria in light of the evolving range of technical characteristics and physical capabilities of variable generation equipment. The *2012 Special Assessment: Interconnection Requirements for Variable Generation*[6] includes several recommendations related to FAC-001.

The recommendations suggested adding additional detail to FAC-001, largely to account for the integration of variable generation, and they are generally inconsistent with the less-prescriptive direction of the SDT. Facility interconnection requirements are inherently inconsistent, and the proposed FAC-001-2 acknowledges that, while offering guidance (in the Guidelines and Technical Basis section) on the elements that should be considered for inclusion in Facility interconnection requirements. A Facility interconnection requirement standard cannot be too prescriptive about what must be included in a requirement because each Facility is different, and each Facility is subject to different regional and Transmission Owner Planning criteria. The SDT did accept the IVGTF's suggestion to add "including specifications for minimum static and dynamic reactive power requirements" to better describe the Reactive Power requirements in the "Voltage, Reactive Power, and power factor control bullet."

[6] The *2012 Special Assessment: Interconnection Requirements for Variable Generation* is available here: http://www.nerc.com/files/2012_IVGTF_Task_1-3.pdf.

Exhibit G

Summary of Development History and Complete Record of Development

EXHIBIT G

Summary of Development History

The development record for the proposed revisions to Reliability Standards FAC-001-2 and FAC-002-2 is summarized below.

I. Overview of the Standard Drafting Team

When evaluating a proposed Reliability Standard, the Commission is expected to give "due weight" to the technical expertise of the ERO.[1] The technical expertise of the ERO is derived from the standard drafting team. For this project, the standard drafting team consisted of industry experts, all with a diverse set of experiences. A roster of the standard drafting team members is included in **Exhibit H**.

II. Standard Development History

A. Standard Authorization Request Development

The Standard Authorization Request ("SAR") for revisions to FAC-001-1 and FAC-002-2 was submitted on December 3, 2013. The SAR was posted from December 18, 2013 to January 17, 2014.

B. The First Posting – Formal Comment Period, Ballots and Non-Binding Polls

The first drafts of the proposed FAC-001-2 and FAC-002-2 Reliability Standards were posted for a 45-day public comment period from April 1, 2014 to May 15, 2014 with a ballot conducted from May 6, 2014 to May 15, 2014. The ballot for FAC-001-2 received a quorum of 85.70% and an approval of 79.08%. The ballot for FAC-002-2 received a quorum of 86.28% and an approval of 78.81%. The non-binding polls were conducted from May 6, 2014 to May 16, 2014. For FAC-001-2, 83.52% of those who registered to participate provided an opinion or an abstention and 84.38% of those who provided an opinion indicated support for the VRFs and

[1] Section 215(d)(2) of the Federal Power Act; 16 U.S.C. §824(d)(2) (2006).

VSLs. For FAC-002-2, 83.29% of those who registered to participate provided an opinion or an abstention and 86.03% of those who provided an opinion indicated support for the VRFs and VSLs.

There were comments from approximately 146 people from approximately 110 companies representing all 10 industry segments. Based on comments received, the drafting team made the following changes:

FAC-001-1

- Purpose: The SDT modified the Purpose to include a reference to reliability and to the Bulk Electric System, for consistency with the Purpose in FAC-002-2. The SDT changed "Facility connection requirements" to "Facility interconnection requirements" for consistency with the language used elsewhere in FAC-001-2 and FAC-002-2. The SDT also inserted the term "must" to maintain the previously stated objective of the standard – to protect the integrity of the Bulk Electric System by guaranteeing that entities have access to essential information when seeking interconnection. The SDT changed "Facilities" to "entities" per stakeholder comments that "Facilities" do not seek interconnection. While the SDT originally used "Facilities" for interconnections that involve non-NERC entities, in keeping with the logic of the Project 2010-07 – Generator Requirements at the Transmission Interface drafting team, it believes that the undefined term "entities" is broad enough to account for a variety of interconnections. The phrase "necessary for considering and pursuing that interconnection" was deemed superfluous and has been deleted.
- Applicability: The SDT added "fully" to 4.1.2.1 for consistency with the reference to "full execution of an Agreement" in R2. The SDT has deleted the word "to," which was a typographical error. "Interconnected Transmission systems" was changed to "Transmission system." "Interconnected Transmission systems" was only used in the Project 2010-07 revisions to FAC-001-0 for conformance with language in FAC-002-1. That language is not used in the proposed FAC-002-2, and thus it makes more sense to use the clearer "Transmission system."
- Background: Because many commenters were confused about the reference to the reliability principles (which are referenced in the NERC Standard Processes Manual and posted as a resource document on NERC's Standards Resources page), the drafting team has deleted that sentence from the Background section. Without the section about the reliability principles, the Background too similar to the Purpose to add value, so the Background has been deleted.
- R1: The first words in the Parts of R1 were made lowercase to make clear that the terms are not referring to the NERC Glossary of Terms.
- R2: To ensure that the "what" of the requirement – the action required – is clear, the SDT moved the phrase that begins with "within 45 days…" to the end of the requirement. The SDT added "calendar" between "45" and "days," as was the intention of the SDT (and was already reflected in the VSLs). "Interconnected Transmission

systems" was changed to "Transmission system," as explained in the summary of changes to the Applicability section, above.

- R3, Part 3.2: Similar to the change in R2, the SDT rearranged the words in this Part for clarity, without changing the meaning of the requirement.
- R4: Because an applicable Generator Owner that has already interconnected a Facility to its own Facilities would be required to register as a Transmission Owner, there is no need for applicable Generator Owners to be concerned with procedures regarding material modifications. This is why there is no "update as needed" requirement in R2; the SDT expects the requirement to apply in the time period between Agreement for interconnection, when an applicable Generator Owner is still registered as such, and the moment of interconnection, when an applicable Generator Owner also must register as a Transmission Owner. In the original R3, the SDT believed that an applicable Generator Owner could "address" procedures for materially modifying existing interconnections by indicating that such procedures were not applicable. Upon further review, the SDT believes it is clearer to create two requirements, R3 and R4, to mirror the construction of R1 and R2. Otherwise, the requirements for both Transmission Owners and applicable Generator Owners remain exactly the same, but the addition of R4 makes clearer that applicable Generator Owners need not be concerned with addressing materially modifying existing interconnections.
- VSLs: The VSLs were modified to conform with the minor changes to the requirement language. The High VSL for R1 was modified to better distinguish it from the Moderate VSL for R1.
- Guideline and Technical Basis: The SDT added some language to carry the consideration of materially modified existing interconnections through to the Guidelines and Technical Basis section. Because a Transmission Owner or applicable Generator Owner cannot compel another entity to comply with NERC's standards (and can only give the other entities a list of Facility interconnection requirements that will ensure reliability once the interconnection is made), the final sentence of the Guidelines and Technical Basis section has been deleted, as it was determined to be meaningless.

FAC-002-2

- Purpose: The word "evaluate" was changed to "study" for clearer conformance to the language of the standard, and the reference to conducting and coordinating was deleted to keep the Purpose appropriately high-level.
- Applicability: In the last posting of the standard, Transmission Planner and Transmission Owner appeared on the same line of the Applicability section, and Load-Serving Entity appeared in the Background section instead of the Applicability section. Both errors have been corrected. The SDT added "fully" to 4.1.2.1 for consistency with the reference to "full execution of an Agreement" in FAC-001-2, R2. The SDT has deleted the word "to," which was a typographical error.
- Background: Because many commenters were confused about the reference to the reliability principles (which are referenced in the NERC Standard Processes Manual and posted as a resource document on NERC's Standards Resources page), the drafting team has deleted that sentence from the Background section. Without the section about the reliability principles, the Background too similar to the Purpose to add value, so the Background has been deleted.

- R1: To keep terminology consistent, the SDT changed "integrating" to "interconnecting." The SDT also tightened the main requirement language by changing "conduct studies on" to "study" and removing the redundant "Evaluation of" and "Documentation that…" in the Parts. Throughout FAC-002-2, and in the main requirement language and Part 1.1, the SDT added "existing" to descriptions of material modification to draw a better distinction between new interconnections and materially modified existing interconnections.
- R1, Part 1.2: Because "compliance" has a specific connotation in the NERC environment and, even when it comes to NERC Reliability Standards, the standard should not give the impression that the Planning Coordinator or Transmission Planner is responsible for the interconnecting entity's future compliance with NERC Standards. The SDT has changed "compliance" to "adherence" to retain the original intended meaning – that the Transmission Planner or Planning Coordinator consider all applicable NERC Reliability Standards as it studies a possible new interconnection or material modification to an existing interconnection – but reflect the fact that the entities cannot actually enforce future compliance with the Reliability Standards.
- R2-R4: To better connect with the reference to "material modifications" in R1, the SDT has added references to material modifications in R2, R3, and R4. It has also changed the references to subrequirements to "R1, Parts 1.1-1.4."
- R5: Because an applicable Generator Owner that has already interconnected a Facility to its own Facilities would be required to register as a Transmission Owner, there is no need for applicable Generator Owners to be concerned with studies regarding materially modifying existing interconnections. The SDT believes it is clearer to create two requirements, R4 and R5, to mirror the construction in FAC-001-2. Otherwise, the requirements for both Transmission Owners and applicable Generator Owners remain exactly the same, but the addition of R5 makes clearer that applicable Generator Owners need not be concerned with addressing materially modifications to existing interconnections.

C. Final Ballot

A final ballot for FAC-001-2 and FAC-002-2 was conducted from June 12, 2014 to June 25, 2014. FAC-001-2 received a quorum of 88.78% and an approval of 86.23%. FAC-002-2 received a quorum of 89.03% and an approval of 83.46%.

D. Board of Trustees Approval

The proposed Reliability Standards were approved by the NERC Board of Trustees on August 14, 2014.

Program Areas & Departments > Standards > Project 2010-02 Connecting New Facilities to the Grid
Project 2010-02 Connecting New Facilities to the Grid

Related Files

Status:
FAC-001-2 – Facility Interconnection Requirements and **FAC-002-2 – Facility Interconnection Studies** have been posted for a final ballot through **8 p.m. Eastern on June 23, 2014.** Concurrently, draft Reliability Standard Audit Worksheets (RSAWs) have been posted for industry feedback through **8 p.m. Eastern on June 25, 2014**. Voting results for the standards will be posted and announced after the ballot windows close. If approved, they will be submitted to the Board of Trustees for adoption in August 2014.

Background:
The Standard Processes Manual obligates NERC to conduct periodic reviews on standards that are more than 10 years old and have not yet been revised through other standards development projects. The FAC Five-Year Review Team developed recommendations to revise FAC-001-1 and FAC-002-1; affirm FAC-003-3, FAC-008-3, and FAC-013-2; and delay review of FAC-010-2.1, FAC-011-2, and FAC-014-2. The FAC Five-Year Review Team's recommendations were approved by the Standards Committee on October 17, 2013. On February 6, 2014, the Board of Trustees adopted the FAC Five-Year Review Team's recommendations to affirm FAC-003-3, FAC-008-3, and FAC-013-2. WECC separately reviewed and affirmed FAC-501-WECC-1. A letter explaining this affirmation is posted below.

Project 2010-02 – Connecting New Facilities to the Grid was originally proposed in the Reliability Standards Development Plan: 2010-2012 (see pp. 137-138), but work was never initiated. That project was proposed to "ensure that all of the elements that should be addressed when a new facility is connected to the grid are included" in NERC Reliability Standards and to eliminate fill-in-the-blank components in FAC-001 and FAC-002. Project 2010-02 now refers to the standards development effort to revise FAC-001-1 and FAC-002-1.

Purpose/Industry Need:
The Standards Committee assigned six subject matter experts to review the FAC family of Reliability Standards as part of NERC's obligation to conduct periodic reviews of its Reliability Standards. The Five-Year Review Team determined that FAC-001-1 and FAC-002-1 remain necessary for reliability to ensure that entities establish Facility connection requirements and then conduct assessments using those requirements before integrating new Facilities. Both Reliability Standards, however, require revision to refocus industry effort on those tasks that have a true impact on reliability.

Draft	Action	Dates	Results	Consideration of Comments
Documents for NERC Board of Trustees Review **FAC-001-2** Clean | Redline to Last Approved **FAC-002-2** Clean | Redline to Last Approved **Supporting Materials:** Standard Authorization Request Implementation Plan Consideration of Issues and Directives Mapping Document VRF/VSL Justifications				
FAC-001-2 Clean **(22)** Redline to Last Posted **(23)** | Redline to Last Approved **(24)** **FAC-002-2** Clean **(25)** Redline to Last Posted **(26)** | Redline to Last Approved **(27)** **Implementation Plan** Clean **(28)**| Redline to Last Posted **(29)** Standard Authorization Request **(30)** **Supporting Materials:** Consideration of Issues and Directives **(31)** Mapping Document **(32)** VRF/VSL Justifications **(33)**	Final Ballots Info>> **(34)** Vote>>	06/12/14 - 06/23/14	Summary>>**(37)** Ballot Results FAC-001-2 **(38)** FAC-002-2 **(39)**	
	Draft RSAWs FAC-001-2 **(35)** FAC-002-2 **(36)** Please send RSAW feedback to: RSAWfeedback@nerc.net	06/12/14 - 06/25/14		
Draft 1 **FAC-001-2** Clean **(1)**| Redline to FERC Approved **(2)** **FAC-002-2** Clean **(3)**| Redline to FERC Approved **(4)** Implementation Plan **(5)** **Standard Authorization Request** Clean **(6)**| Redline to Last Posted **(7)** **Supporting Materials:** Unofficial Comment Form **(8)** Consideration of Issues and Directives **(9)** Mapping Document **(10)** VRF/VSL Justifications **(11)**	Ballots and Non-Binding Polls Updated Info>> **(12)** Info >> **(13)** Vote >>	05/06/14 - 05/15/14	Summary>> **(15)** Ballot Results FAC-001-2 **(16)** FAC-002-2 **(17)** Non-Binding Poll Results FAC-001-2 **(18)** FAC-002-2 **(19)**	
	Comment Period Info >> **(14)**	04/01/14 - 05/15/14	Comments Received>> **(20)**	

	Submit Comments >> Join Ballot Pool >>	04/01/14 - 05/01/14		Consideration of Comments>> **(21)**
SAR to Revise FAC-001 and FAC-002 Clean | Redline to Last Posted **Proposed Redlines of Standards (to supplement SAR)** Redline of FAC-001-1 Requirements Redline of FAC-002-1 Requirements **Supporting Documents:** Unofficial Comment Form (Word)	Informal Comment Period Info>> Submit Comments>>	12/18/13 - 1/17/14		Consideration of Comments >>
WECC Recommendation to Affirm FAC-501-WECC-01 (Posted June 12, 2014)				
Final Recommendations for Revision (Submitted to the Standards Committee for Review) Recommendation to Revise FAC-001-1 Recommendation to Revise FAC-002-1 **SAR** Clean |Redline to last posted Redline of FAC-001-1 Requirements (to Supplement SAR) Redline of FAC-002-1 Requirements (to Supplement SAR) **Recommendations for Affirmation or Delayed Review (Submitted to the Standards Committee for Review)** Recommendation to Affirm FAC-003-3 Recommendation to Affirm FAC-008-3 Recommendation to Affirm FAC-013-2 Recommendation to Delay Review of FAC-010-2.1, FAC-011-2, and FAC-014-2 **Supporting Materials:** Summary Chart for all FAC Recommendations				
Recommendations for Revision Recommendation to Revise FAC-001-1 Recommendation to Revise FAC-002-1 Standard Authorization Request **Recommendations for Affirmation or Delayed Review** Recommendation to Affirm FAC-003-3 Recommendation to Affirm FAC-008-3 Recommendation to Affirm FAC-013-2 Recommendation to Delay Review of FAC-010-2.1, FAC-011-2, and FAC-014-2 **Supporting Materials:** Summary Chart for All FAC Recommendations Unofficial Comment Form (Word) for Recommendations for Revision Unofficial Comment Form (Word) for Recommendations for Affirmation or Delayed Review	Comment Period Info>> Submit Comments>> (FAC-001-1, FAC-002-1) Submit Comments>> (FAC-003-3, FAC-008-3, FAC-010-2.1, FAC-011-2, FAC-013-2, FAC-014-2)	08/01/13-09/16/13 (closed)	Comments Received>> FAC-001-1, FAC-002-1) Comments Received>> (FAC-003-3, FAC-008-3, FAC-010-2.1, FAC-011-2, FAC-013-2, FAC-014-2)	Consideration of Comments>> (FAC-001-1, FAC-002-1) Consideration of Comments>> (FAC-003-3, FAC-008-3, FAC-01-=2.1, FAC-011-2, FAC-013-2, FAC-014-2)

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment (December 18, 2013-January 17, 2014)
2. SC authorized moving the SAR forward to standard development (March 31, 2013)

Description of Current Draft

Anticipated Actions	Anticipated Date
45-day Formal Comment Period with Parallel Initial Ballot	April 2014
45-day Formal Comment Period with Parallel Additional Ballot	June 2014
Final Ballot	July 2014
BOT adoption	August 2014

Effective Date

The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
1		Added requirements for Generator Owner and brought overall standard format up to date.	Revision under Project 2010-07
1	February 9, 2012	Adopted by the Board of Trustees	
1	September 19, 2013	A FERC order was issued on September 19, 2013, approving FAC-001-1. This standard becomes enforceable on November 25, 2013 for Transmission Owners. For Generator Owners, the standard becomes enforceable on January 1, 2015.	
2		Revisions to implement the recommendations of the FAC Five-Year Review Team.	Revision under Project 2010-02

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

When this standard has received ballot approval, the text boxes will be moved to the Application Guidelines Section of the Standard.

A. Introduction

1. **Title:** **Facility Interconnection Requirements**

2. **Number:** FAC-001-2

3. **Purpose:** To ensure that Transmission Owners and applicable Generator Owners document and make Facility connection requirements available so that Facilities seeking interconnection will have the information necessary for considering and pursuing that interconnection.

4. **Applicability:**

   4.1. Functional Entities:

   4.1.1 Transmission Owner

   4.1.2 Applicable Generator Owner

   4.1.2.1 Generator Owner with an executed Agreement to conduct a study to on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.

5. **Background:**

The objective of FAC-001 is to ensure that Transmission Owners and applicable Generator Owners document Facility interconnection requirements so that Facilities seeking interconnection will have the information necessary for considering and pursuing that interconnection. This objective supports reliability principle 3, which states that "information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably."

In the phrase "Facilities seeking interconnection," the SDT chose to use the NERC Glossary term "Facilities" rather than "entities" in order to refer to both NERC Registered Entities that own Facilities seeking interconnection *and* third parties that may not yet be NERC Registered entities that own Facilities seeking interconnection.

B. Requirements and Measures

R1. Each Transmission Owner shall document Facility interconnection requirements, update them as needed, and make them available upon request. Each Transmission Owner's Facility interconnection

Rationale for Changes: R1 was revised to remove elements that are redundant with FAC-002 and clarify the actions required.

requirements shall address interconnection requirements for: *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*

1.1. Generation Facilities;

1.2. Transmission Facilities; and

1.3. End-user Facilities.

M1. Each Transmission Owner shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R1.

R2. Each applicable Generator Owner shall, within 45 days of full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems, document Facility interconnection requirements and make them available upon request. *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*

Rationale for Changes: R2 was revised for clarity and consistency with R1.

M2. Each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R2.

R3. Each Transmission Owner and each applicable Generator Owner shall address the following items in its Facility interconnection requirements: *[Violation Risk Factor: Lower] [Time Horizon: Long-Term Planning]*

Rationale for Changes: The SDT determined that the subparts of R3 are too prescriptive for inclusion in a standard. The subparts have been moved to the "Guidelines and Technical Basis" section of the standard.

3.1. Procedures for coordinated studies of new or materially modified Facilities and their impacts on affected system(s).

3.2. Procedures for notification of new or materially modified Facilities to those responsible for the reliability of affected system(s).

M3. Each Transmission Owner and each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements addressing the procedures) that it met all requirements in Requirement R3.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention

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

The Transmission Owner and applicable Generator Owner shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The responsible entities shall retain documentation as evidence for three years.

If a responsible entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audit

Self-Certification

Spot Check

Compliance Investigation

Self-Reporting

Complaint

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Lower	N/A	The Transmission Owner documented Facility interconnection requirements and updated them as needed, but failed to make them available upon request. OR The Transmission Owner documented Facility interconnection requirements and made them available upon request, but failed to update them as needed. OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but	The Transmission Owner documented Facility interconnection requirements, but failed to update them as needed and make them available upon request. OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for two of the Facilities as specified in R1.1, R1.2, or R1.3.	The Transmission Owner did not document Facility interconnection requirements.

				failed to address interconnection requirements for one of the Facilities as specified in R1.1, R1.2, or R1.3.		
R2	Long-term Planning	Lower	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 45 calendar days but less than or equal to 60 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 60 calendar days but less than or equal to 70 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 70 calendar days but less than or equal to 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 80 days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.

R3	Long-term Planning	Lower	N/A	N/A	The Transmission Owner or applicable Generator Owner addressed either R3.1 or R3.2 in its Facility interconnection requirements, but did not address both.	The Transmission Owner or applicable Generator Owner addressed neither R3.1 nor R3.2 in its Facility interconnection requirements.

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Guidelines and Technical Basis

Entities should have documentation to support the technical rationale for determining whether a Facility was "materially modified." Recognizing that what constitutes a "material modification" will vary from entity to entity, the intent is for this determination to be based on engineering judgment.

Requirement R3:

Originally the subparts of R3, with the exception of the first two bullets, which were added by the Project 2010-02 drafting team, this list has been moved to Guidelines and Technical Basis section to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as subparts of R3 was deemed too prescriptive, as frequently some items in the list will not apply to all applicable entities – and some applicable entities will have requirements that expand upon this list.

Each Transmission Owner and applicable Generator Owner should consider the following items in the development of Facility interconnection requirements:

- Procedures for requesting a new Facility interconnection
- Data required to properly study the new interconnection
- Voltage level and MW and MVAR capacity or demand at point of interconnection
- Breaker duty and surge protection
- System protection and coordination
- Metering and telecommunications
- Grounding and safety issues
- Insulation and insulation coordination
- Voltage, Reactive Power (including specifications for minimum static and dynamic reactive power requirements), and power factor control
- Power quality impacts
- Equipment ratings
- Synchronizing of Facilities
- Maintenance coordination
- Operational issues (abnormal frequency and voltages)
- Inspection requirements for existing or new Facilities
- Communications and procedures during normal and emergency operating conditions

The Transmission Owner's or applicable Generator Owner's Facility interconnection requirements should ensure that by the time of interconnection, the interconnecting Facility will be able to comply with all applicable NERC Reliability Standards.

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment (~~Dates of posting~~December 18, 2013-January 17, 2014)~~.~~
2. SC authorized moving the SAR forward to standard development (~~SC meeting date when authorized).~~March 31, 2013)

Description of Current Draft

Anticipated Actions	Anticipated Date
45-day Formal Comment Period with Parallel Initial Ballot	April 2014
45-day Formal Comment Period with Parallel Additional Ballot	June 2014
Final Ballot	July 2014
BOT adoption	August 2014

Effective Date

~~s~~

The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

~~In those jurisdictions where regulatory approval is required, all requirements applied to the Transmission Owner become effective upon regulatory approval. In those jurisdictions where no regulatory approval is required, all requirements applied to the Transmission Owner and Regional Entity become effective upon Board of Trustees' adoption.~~

~~In those jurisdictions where regulatory approval is required, all requirements applied to the Generator Owner become effective on the first calendar day of the first calendar quarter one year after the date of the order approving the standard from applicable regulatory authorities. In those jurisdictions where no regulatory approval is required, all requirements applied to the Generator Owner become effective on the first calendar day of the first calendar quarter one year after Board of Trustees' adoption.~~

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
1		Added requirements for Generator Owner and brought overall standard format up to date.	Revision under Project 2010-07
1	February 9, 2012	Adopted by the Board of Trustees	
1	September 19, 2013	A FERC order was issued on September 19, 2013, approving FAC-001-1. This standard becomes enforceable on November 25, 2013 for Transmission Owners. For Generator Owners, the standard becomes enforceable on January 1, 2015.	

2		Revisions to implement the recommendations of the FAC Five-Year Review Team.	Revision under Project 2010-02

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

When this standard has received ballot approval, the text boxes will be moved to the Application Guidelines Section of the Standard.

A. Introduction

1. Title: **Facility Interc~~C~~onnection Requirements**

~~**2. Number:**~~ FAC-001-2~~1~~

2.

3. Purpose: To ensure that Transmission Owners and applicable Generator Owners document and make Facility connection requirements available so that Facilities seeking interconnection will have the information necessary for considering and pursuing that interconnection. ~~To avoid adverse impacts on reliability, Transmission Owners and Generator Owners must establish Facility connection and performance requirements~~

~~**3.** .~~

4. Applicability:

4.1. Functional Entities:

4.1.1 Transmission Owner

4.1.2 Applicable Generator Owner

4.1.2.1 Generator Owner with an executed Agreement to conduct a study to one~~evaluate~~ the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.

5. Background:

~~Text~~The objective of FAC-001 is to ensure that Transmission Owners and applicable Generator Owners document Facility interconnection requirements so that Facilities seeking interconnection will have the information necessary for considering and pursuing that interconnection. This objective supports reliability principle 3, which states that "information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably."

In the phrase "Facilities seeking interconnection," the SDT chose to use the NERC Glossary term "Facilities" rather than "entities" in order to refer to both NERC Registered Entities that own Facilities seeking interconnection *and* third parties that may not yet be NERC Registered entities that own Facilities seeking interconnection.

B. Requirements and Measures

R1. ~~The~~ Each Transmission Owner shall document~~, maintain, and publish Facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements.~~ Facility interconnection requirements, update them as needed, and make them available upon request. ~~The~~Each Transmission Owner's Facility interconnection requirements shall address interconnection requirements for: *[Violation Risk Factor: ~~Medium~~Lower] [Time Horizon: Long-term Planning~~-~~]*

Rationale for Changes: R1 was revised to remove elements that are redundant with FAC-002 and clarify the actions required.

1.1. Generation Facilities~~,~~;

1.2. Transmission Facilities~~,~~; and

1.3. End-user Facilities.

M1. ~~The~~ Each Transmission Owner shall ~~make available~~have evidence ~~-~~(such as dated, documented Facility interconnection requirements) ~~(to its Compliance Enforcement Authority) evidence~~ that it met ~~-~~all ~~the~~ requirements ~~stated~~ in Requirement R1.

R2. Each applicable Generator Owner shall, within 45 days of ~~having~~ full execution of an ~~executed~~ Agreement to ~~evaluate~~ conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems ~~(under FAC-002-1)~~, document ~~and publish its Facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements.~~Facility interconnection requirements and make them available upon request. *[Violation Risk Factor: ~~Medium~~Lower] [Time Horizon: Long-term Planning]*

Rationale for Changes: R2 was revised for clarity and consistency with R1.

M2. ~~Each~~ Each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements) ~~that has an executed Agreement to evaluate the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems shall make available (to its Compliance Enforcement Authority) evidence~~ that it met all requirements ~~stated~~ in Requirement R2.

Rationale for Changes: The SDT determined that the subparts of R3 are too prescriptive for inclusion in a standard. The subparts have been moved to the "Guidelines and Technical Basis" section of the standard.

R3. Each Transmission Owner and each applicable Generator Owner ~~(in accordance with Requirement R2)~~ shall address the following items in its Facility interconnection requirements: *[Violation Risk Factor: ~~Medium~~Lower] [Time Horizon: Long-Term Planning]*

~~**3.1.** Provide a written summary of its plans to achieve the required system performance as described in Requirements R1 or R2 throughout the planning horizon:~~

~~**3.1.1.**~~**3.1.** Procedures for coordinated ~~joint~~ studies of new or materially modified Facilities and their impacts on ~~the interconnected~~affected ~~Transmission~~ system(s).

~~**3.1.2.**~~**3.2.** Procedures for notification of new or materially modified Facilities to ~~others (~~those responsible for the reliability of ~~the interconnected~~affected ~~Transmission~~ system(s) ~~as soon as feasible~~.

~~**3.1.3.** Voltage level and MW and MVAR capacity or demand at point of connection.~~

~~**3.1.4.** Breaker duty and surge protection.~~

~~**3.1.5.** System protection and coordination.~~

~~**3.1.6.** Metering and telecommunications.~~

~~**3.1.7.** Grounding and safety issues.~~

~~**3.1.8.** Insulation and insulation coordination.~~

~~**3.1.9.** Voltage, Reactive Power, and power factor control.~~

~~**3.1.10.** Power quality impacts.~~

~~**3.1.11.** Equipment Ratings.~~

~~**3.1.12.** Synchronizing of Facilities.~~

~~**3.1.13.** Maintenance coordination.~~

~~**3.1.14.** Operational issues (abnormal frequency and voltages).~~

~~**3.1.15.** Inspection requirements for existing or new Facilities.~~

~~**3.1.16.** Communications and procedures during normal and emergency operating conditions.~~

M3. ~~Each~~Each Transmission Owner and each applicable Generator Owner ~~(in accordance with Requirement R2)~~ shall ~~make available (to its Compliance Enforcement Authority)~~have evidence (such as dated, documented Facility interconnection requirements addressing the procedures) that it met all requirements ~~stated~~ in Requirement R3.

~~**R4.** The Transmission Owner shall maintain and update its Facility connection requirements as required. The Transmission Owner shall make documentation of these requirements available to the users of the transmission system, the Regional Entity, and ERO on request (five business days). *[Violation Risk Factor: Medium] [Time Horizon:]*~~

~~**M4.** The Transmission Owner shall make available (to its Compliance Enforcement Authority) evidence that it met all the requirements stated in Requirement R4.~~

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention

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

The Transmission Owner and applicable Generator Owner shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The responsible entities shall retain documentation as evidence for three years.

If a responsible entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audit

Self-Certification

Spot Check

Compliance Investigation

Self-Reporting

Complaint

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Lower~~Medium~~	~~Not Applicable.~~N/A	The Transmission Owner documented Facility interconnection requirements and updated them as needed, but failed to make them available upon request. ~~The Transmission Owner failed to do one of the following:~~ ~~Document or maintain or publish Facility connection requirements as specified in the Requirement~~ OR The Transmission Owner documented Facility interconnection requirements and	The Transmission Owner documented Facility interconnection requirements, but failed to update them as needed and make them available upon request. ~~The Transmission Owner failed to do one of the following:~~ ~~Failed to include (2) of the components as specified in R1.1, R1.2 or R1.3~~ OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to	The Transmission Owner did not ~~develop~~ document Facility interconnection requirements.

				made them available upon request, but failed to update them as needed. OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for one of the Facilities as specified in R1.1, R1.2, or R1.3.~~Failed to include one (1) of the components as specified in R1.1, R1.2 or R1.3.~~	address interconnection requirements for two of the Facilities as specified in R1.1, R1.2, or R1.3. ~~OR~~ ~~Failed to document or maintain or publish its Facility connection requirements as specified in the Requirement and failed to include one (1) of the components as specified in R1.1, R1.2 or R1.3.~~	
R2	Long-term Planning	Lower~~Medium~~	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request ~~and~~	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request~~and~~	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request ~~and~~	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request ~~and~~

			publish Facility connection requirements until more than 45 calendar days but less than or equal to 60 calendar days after full execution of having an Agreement to evaluate conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.	publish Facility connection requirements until more than 60 calendar days but less than or equal to 70 calendar days after full execution ofhaving an Agreement to conduct a study onevaluate the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.	publish Facility connection requirements until more than 70 calendar days but less than or equal to 80 calendar days after full execution of having an Agreement to conduct a study onevaluate the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.	publish Facility connection requirements until more than 80 days after full execution of having an Agreement to conduct a study onevaluate the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.
R3	Long-term Planning	MediumLower	N/AThe responsible entity's Facility connection requirements failed to address one of the parts listed in Requirement R3, parts 3.1.1 through 3.1.16.	N/AThe responsible entity's Facility connection requirements failed to address two of the parts listed in Requirement R3, parts 3.1.1 through 3.1.16.	The Transmission Owner or applicable Generator Owner addressed either R3.1 or R3.2 in its Facility interconnection requirements, but did not address both.The responsible entity's Facility connection requirements failed to	The Transmission Owner or applicable Generator Owner addressed neither R3.1 nor R3.2 in its Facility interconnection requirements. responsible entity's Facility connection requirements failed to

					~~address three of the parts listed in Requirement R3, parts 3.1.1 through 3.1.16.~~	~~address four or more of the parts listed in Requirement R3, parts 3.1.1 through 3.1.16.~~
~~**R4**~~		~~Medium~~	~~The responsible entity made the requirements available more than five business days but less than or equal to 10 business days after a request.~~	~~The responsible entity made the requirements available more than 10 business days but less than or equal to 20 business days after a request.~~	~~The responsible entity made the requirements available more than 20 business days less than or equal to 30 business days after a request.~~	~~The responsible entity made the requirements available more than 30 business days after a request.~~

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Guidelines and Technical Basis

Entities should have documentation to support the technical rationale for determining whether a Facility was "materially modified." Recognizing that what constitutes a "material modification" will vary from entity to entity, the intent is for this determination to be based on engineering judgment.

~~**Requirement R1:**~~

~~**Requirement R2:**~~

Requirement R3:

Originally the subparts of R3, with the exception of the first two bullets, which were added by the Project 2010-02 drafting team, this list has been moved to Guidelines and Technical Basis section to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as subparts of R3 was deemed too prescriptive, as frequently some items in the list will not apply to all applicable entities – and some applicable entities will have requirements that expand upon this list.

Each Transmission Owner and applicable Generator Owner should consider the following items in the development of Facility interconnection requirements:

- Procedures for requesting a new Facility interconnection
- Data required to properly study the new interconnection
- Voltage level and MW and MVAR capacity or demand at point of interconnection
- Breaker duty and surge protection
- System protection and coordination
- Metering and telecommunications
- Grounding and safety issues
- Insulation and insulation coordination
- Voltage, Reactive Power (including specifications for minimum static and dynamic reactive power requirements), and power factor control
- Power quality impacts
- Equipment ratings
- Synchronizing of Facilities
- Maintenance coordination

- Operational issues (abnormal frequency and voltages)
- Inspection requirements for existing or new Facilities
- Communications and procedures during normal and emergency operating conditions

The Transmission Owner's or applicable Generator Owner's Facility interconnection requirements should ensure that by the time of interconnection, the interconnecting Facility will be able to comply with all applicable NERC Reliability Standards.

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment (December 18, 2013-January 17, 2014).
2. SC authorized moving the SAR forward to standard development (March 31, 2014)

Description of Current Draft

Anticipated Actions	Anticipated Date
45-day Formal Comment Period with Parallel Initial Ballot	April 2014
45-day Formal Comment Period with Parallel Additional Ballot	June 2014
Recirculation ballot	July 2014
BOT adoption	August 2014

Effective Dates

The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	January 13, 2006	Removed duplication of "Regional Reliability Organizations(s).	Errata
1	August 5, 2010	Modified to address Order No. 693 Directives contained in paragraph 693. Adopted by the NERC Board of Trustees.	Revised
1	February 7, 2013	R2 and associated elements approved by NERC Board of Trustees for retirement as part of the Paragraph 81 project (Project 2013-02) pending applicable regulatory approval.	
1	November 21, 2013	R2 and associated elements approved by FERC for retirement as part of the Paragraph 81 project (Project 2013-02)	
2		Revisions to implement the recommendations of the FAC Five-Year Review Team.	Revision under Project 2010-02

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

When this standard has received ballot approval, the text boxes will be moved to the Application Guidelines Section of the Standard.

A. Introduction

1. Title: **Facility Interconnection Studies**

2. Number: FAC-002-2

3. Purpose: To evaluate the impact of interconnecting new or materially modified Facilities on the Bulk Electric System by conducting and coordinating studies.

4. Applicability:

4.1. Functional Entities:

4.1.1 Planning Coordinator

4.1.2 Transmission Planner Transmission Owner

4.1.3 Distribution Provider

4.1.4 Generator Owner

4.1.5 Applicable Generator Owner

4.1.5.1 Generator Owner with an executed Agreement to conduct a study to on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.

5. Load-Serving Entity **Background:**

The objective of FAC-002 is to ensure that the entities involved in the integration of new or materially modified Facilities conduct and coordinate studies before any interconnection occurs so that the interconnection is determined to be technically feasible and reliable. This objective supports reliability principle 1, which states that "interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards."

B. Requirements and Measures

R1. Each Transmission Planner and each Planning Coordinator shall conduct studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities. The studies shall include: *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

1.1. Evaluation of the reliability impact of the new or materially modified Facilities on affected system(s);

1.2. Evaluation of compliance with applicable NERC Reliability Standards; regional and Transmission Owner planning criteria; and Facility interconnection requirements;

1.3. Steady-state, short-circuit, and dynamics studies as necessary to evaluate system performance under both normal and contingency conditions; and

1.4. Documentation that the assessment included study assumptions, system performance, alternatives considered, and coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.

M1. Each Transmission Planner and each Planning Coordinator shall have evidence (such as study reports, including documentation of reliability issues) that it met all requirements in Requirement R1.

R2. Each Generator Owner seeking to interconnect generation Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

Rationale for Changes: The SDT separated the original R1 into multiple requirements to add clarity and better distinguish the actions required of the applicable entities. The Generator Owner's primary responsibilities are coordinating and cooperating with the Transmission Planner and Planning Coordinator as studies are conducted.

M2. Each Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R2.

R3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

Rationale for Changes: The SDT separated R1 into multiple requirements to add clarity and better distinguish the actions required of the applicable entities. The Transmission Owner's, Distribution Provider's, and Load-Serving Entity's primary responsibilities are coordinating and cooperating with the Transmission Planner and Planning Coordinator as studies are conducted.

M3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R3.

R4. Each Transmission Owner and each applicable Generator Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its Facilities, including but not limited to the provision of data as described in R1.1-R1.3. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

Rationale for Changes: The SDT proposed a new requirement, R4, to address a possible gap regarding the responsibilities of the Transmission Owners and applicable Generator Owners that have received requests to interconnect to their Facilities.

M4. Each Transmission Owner and each applicable Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R4.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention

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

The Planning Coordinator, Transmission Planner, Transmission Owner, Distribution Provider, Generator Owner, applicable Generator Owner, and Load-Serving Entity shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The responsible entities shall retain documentation as evidence for three years.

If a responsible entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audit

Self-Certification

Spot Check

Compliance Investigation

Self-Reporting

Complaint

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Medium	The Transmission Planner or Planning Coordinator conducted studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities but failed to include in its studies one of the parts in R1.1-R1.4.	The Transmission Planner or Planning Coordinator conducted studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities but failed to include in its studies two of the parts in R1.1-R1.4.	The Transmission Planner or Planning Coordinator conducted studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities but failed to include in its studies three of the parts in R1.1-R1.4.	The Transmission Planner or Planning Coordinator failed to conduct studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities.
R2	Long-term Planning	Medium	The Generator Owner seeking to interconnect generation Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in	The Generator Owner seeking to interconnect generation Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in	The Generator Owner seeking to interconnect generation Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the parts in R.1-R1.4.	The Generator Owner seeking to interconnect generation Facilities failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.

			one of the parts in R.1-R1.4.	two of the parts in R.1-R1.4.		
R3	Long-term Planning	Medium	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the parts in R.1-R1.4.	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the parts in R.1-R1.4.	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the parts in R.1-R1.4.	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.
R4	Long-term Planning	Medium	The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary	The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary	The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary	The Transmission Owner or applicable Generator Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities.

			to perform studies as described in one of the parts in R.1-R1.4.	to perform studies as described in two of the parts in R.1-R1.4.	to perform studies as described in three of the parts in R.1-R1.4.	

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Guidelines and Technical Basis

Entities should have documentation to support the technical rationale for determining whether a Facility was “materially modified.” Recognizing that what constitutes a “material modification” will vary from entity to entity, the intent is for this determination to be based on engineering judgment.

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment (December 18, 2013-January 17, 2014~~Dates of posting~~).
2. SC authorized moving the SAR forward to standard development (March 31, 2014)~~SC meeting date when authorized).~~

Description of Current Draft

Anticipated Actions	Anticipated Date
45-day Formal Comment Period with Parallel Initial Ballot	April 2014
45-day Formal Comment Period with Parallel Additional Ballot	June 2014
Recirculation ballot	July 2014
BOT adoption	August 2014

Effective Dates

~~**The first day of the first calendar quarter six months after applicable regulatory approval; or in those jurisdictions where no regulatory approval is required, the first day of the first calendar quarter six months after Board of Trustees' adoption.**~~The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	January 13, 2006	Removed duplication of "Regional Reliability Organizations(s).	Errata
1	August 5, 2010	Modified to address Order No. 693 Directives contained in paragraph 693. Adopted by the NERC Board of Trustees.	Revised
1	February 7, 2013	R2 and associated elements approved by NERC Board of Trustees for retirement as part of the Paragraph 81 project (Project 2013-02) pending applicable regulatory approval.	
1	November 21, 2013	R2 and associated elements approved by FERC for retirement as part of the Paragraph 81 project (Project 2013-02)	
2		Revisions to implement the recommendations of the FAC Five-Year Review Team.	Revision under Project 2010-02

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

When this standard has received ballot approval, the text boxes will be moved to the Application Guidelines Section of the Standard.

A. Introduction

1. **Title:** Facility Interconnection Studies~~Coordination of Plans for New Generation, Transmission, and End-User Facilities~~

2. **Number:** FAC-002-2~~1~~

3. **Purpose:** To evaluate the impact of interconnecting new or materially modified Facilities on the Bulk Electric System by conducting and coordinating studies. ~~To avoid adverse impacts on reliability, Generator Owners and Transmission Owners and electricity end-users must meet facility connection and performance requirements.~~

~~3.~~

4. **Applicability:**

   4.1. Functional Entities:

   4.1.1 Planning Coordinator

   ~~**4.1.1**~~ Transmission Planner

   4.1.2 ~~Generator Owner~~

   4.1.3 Transmission Owner

   4.1.4 Distribution Provider

   ~~**4.1.4**~~ Generator Owner

   4.1.5

   4.1.6 Applicable Generator Owner

   4.1.6.1 Generator Owner with an executed Agreement to conduct a study to on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.

   ~~**4.1.6**~~ Load-Serving Entity

   4.1.7 ~~Transmission Planner~~

   ~~**4.1.8** Planning Authority~~

5. **Background:**

   ~~Text~~The objective of FAC-002 is to ensure that the entities involved in the integration of new or materially modified Facilities conduct and coordinate studies before any interconnection occurs so that the interconnection is determined to be technically feasible and reliable. This objective supports reliability principle 1, which states that "interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards."

B. Requirements and Measures

R1. ~~The~~ Each ~~Generator Owner, Transmission Owner, Distribution Provider, and Load-Serving Entity seeking to integrate~~Transmission Planner and each Planning Coordinator shall conduct studies on the reliability impact of integrating new or materially modified generation ~~facilities~~, transmission ~~facilities~~, ~~and~~ or electricity end-user ~~facilities shall each coordinate and cooperate on its assessments with its Transmission Planner and Planning Authority~~Facilities. ~~-~~The ~~assessment~~ studies shall include: *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

Rationale for Changes: The SDT separated the original R1 into multiple requirements to add clarity and better distinguish the actions required of the applicable entities. The Transmission Planner's and Planning Coordinator's primary responsibility is conducting studies.

~~**1.1.**~~ Evaluation of the reliability impact of the new or materially modified Facilities on affected system(s); ~~facilities and their connections on the interconnected transmission systems.~~

~~**1.2.** Ensurance of compliance with NERC Reliability Standards and applicable Regional, subregional, Power Pool, and individual system planning criteria and facility connection requirements.~~

~~**1.3.**~~**1.1.** ~~Evidence that the parties involved in the assessment have coordinated and cooperated on the assessment of the reliability impacts of new facilities on the interconnected transmission systems. While these studies may be performed independently, the results shall be jointly evaluated and coordinated by the entities involved.~~

1.2. Evaluation of compliance with applicable NERC Reliability Standards; regional and Transmission Owner planning criteria; and Facility interconnection requirements;

~~**1.4.**~~**1.3.** ~~Evidence that the assessment included s~~Steady-state, short-circuit, and dynamics studies as necessary to evaluate system performance under both normal and contingency conditions ~~in accordance with Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0~~; and~~.~~

1.4. Documentation that the assessment included study assumptions, system performance, alternatives considered, and ~~jointly~~ coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.

~~**1.5.**~~

M1. ~~The~~ Each ~~Planning Authority,~~ Transmission Planner and each Planning Coordinator shall have evidence (such as study reports, including documentation of reliability issues) that it met all requirements in Requirement R1~~, Generator Owner, Transmission Owner, Load-Serving Entity, and Distribution Provider's documentation of its assessment of the reliability impacts of new facilities shall address all items in Reliability Standard FAC-002-0_R1~~.

R2. Each Generator Owner seeking to interconnect generation Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

Rationale for Changes: The SDT separated the original R1 into multiple requirements to add clarity and better distinguish the actions required of the applicable entities. The Generator Owner's primary responsibilities are coordinating and cooperating with the Transmission Planner and Planning Coordinator as studies are conducted.

M2. Each Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R2.

R3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

Rationale for Changes: The SDT separated R1 into multiple requirements to add clarity and better distinguish the actions required of the applicable entities. The Transmission Owner's, Distribution Provider's, and Load-Serving Entity's primary responsibilities are coordinating and cooperating with the Transmission Planner and Planning Coordinator as studies are conducted.

M3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R3.

R4. Each Transmission Owner and each applicable Generator Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its Facilities, including but not limited to the provision of data as described in R1.1-R1.3. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

Rationale for Changes: The SDT proposed a new requirement, R4, to address a possible gap regarding the responsibilities of the Transmission Owners and applicable Generator Owners that have received requests to interconnect to their Facilities.

M4. Each Transmission Owner and each applicable Generator Owner shall have evidence (such as documents containing the data provided

in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R4.

~~**R2.** The Planning Authority, Transmission Planner, Generator Owner, Transmission Owner, Load-Serving Entity, and Distribution Provider shall each retain its documentation (of its evaluation of the reliability impact of the new facilities and their connections on the interconnected transmission systems) for three years and shall provide the documentation to the Regional Reliability Organization(s) and NERC on request (within 30 calendar days). (Retirement approved by FERC effective January 21, 2014.) *[Violation Risk Factor:] [Time Horizon:]*~~

Rationale for R5: The retirement of R5 under Paragraph 81 was approved by FERC, effective January 21, 2014.

~~**M2.** The Planning Authority, Transmission Planner, Generator Owner, Transmission Owner, Load-Serving Entity, and Distribution Provider shall each have evidence of its assessment of the reliability impacts of new facilities and their connections on the interconnected transmission systems is retained and provided to other entities in accordance with Reliability Standard FAC-002-0_R2. (Retirement approved by FERC effective January 21, 2014.)~~

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention

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

The Planning Coordinator, Transmission Planner, Transmission Owner, Distribution Provider, Generator Owner, applicable Generator Owner, and Load-Serving Entity shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The responsible entities shall retain documentation as evidence for three years.

If a responsible entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audit

Self-Certification

Spot Check

Compliance Investigation

Self-Reporting

Complaint

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Medium	The Transmission Planner or Planning Coordinator conducted studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities but failed to include in its studies one of the parts in R1.1-R1.4.~~The Responsible Entity failed to include in their assessment one of the subrequirements.~~	The Transmission Planner or Planning Coordinator conducted studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities but failed to include in its studies two of the parts in R1.1-R1.4.~~The Responsible Entity failed to include in their assessment two of the subrequirements~~	The Transmission Planner or Planning Coordinator conducted studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities but ~~Responsible Entity~~ failed to include in ~~their~~ its studies~~assessment three~~ three of the ~~subrequirement~~parts in R1.1-R1.4~~s~~.	The ~~Responsible Entity~~Transmission Planner or Planning Coordinator failed to conduct studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities. ~~include in their assessment four or more of the subrequirements.~~
~~**R1.1**~~			~~Not Applicable.~~	~~Not Applicable.~~	~~Not Applicable.~~	~~The responsible entity's assessment did not include the evaluation.~~
~~**R1.2**~~			~~Not Applicable.~~	~~Not Applicable.~~	~~Not Applicable.~~	~~The responsible entity's assessment did not include the~~

						ensurance of compliance.
R1.3			Not Applicable.	Not Applicable.	Not Applicable.	The responsible entity's assessment did not include the evidence of coordination.
R1.4			Not Applicable.	Not Applicable.	Not Applicable.	The responsible entity's assessment did not include the evidence of the studies.
R1.5			Not Applicable.	Not Applicable.	Not Applicable.	The responsible entity's assessment did not include the documentation.
R2	Long-term Planning	Medium	The Generator Owner seeking to interconnect generation Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the parts in R.1-R1.4.	The Generator Owner seeking to interconnect generation Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the parts in R.1-R1.4.	The Generator Owner seeking to interconnect generation Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the parts in R.1-R1.4.	The Generator Owner seeking to interconnect generation Facilities failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.

R3	Long-term Planning	Medium	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the parts in R.1-R1.4.	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the parts in R.1-R1.4.	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the parts in R.1-R1.4.	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.
R4	Long-term Planning	Medium	The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as	The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as	The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as	The Transmission Owner or applicable Generator Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities.

			described in one of the parts in R.1-R1.4.	described in two of the parts in R.1-R1.4.	described in three of the parts in R.1-R1.4.	
~~R2~~			~~The responsible entity provided the documentation more than 30 calendar days, but not more than 45 calendar days, after a request.~~	~~The responsible entity provided the documentation more than 45 calendar days, but not more than 60 calendar days, after a request.~~	~~The responsible entity provided the documentation more than 60 calendar days, but not more than 120 calendar days, after a request.~~	~~The responsible entity provided the documentation more than 120 calendar days after a request or was unable to provide the documentation.~~

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Guidelines and Technical Basis

Entities should have documentation to support the technical rationale for determining whether a Facility was "materially modified." Recognizing that what constitutes a "material modification" will vary from entity to entity, the intent is for this determination to be based on engineering judgment.

~~Requirement R1:~~

~~Requirement R2:~~

~~Requirement R3:~~

Implementation Plan

Project 2010-02 – Connecting New Facilities to the Grid

Requested Approvals

- FAC-001-2 – Facility Interconnection Requirements
- FAC-002-2 – Facility Interconnection Studies

Requested Retirements

- FAC-001-1 – Facility Connection Requirements
- FAC-002-1 – Coordination of Plans for New Generation, Transmission, and End-User Facilities

Prerequisite Approvals

There are no other standards that must receive approval prior to the approval of these standards.

Revisions to Defined Terms in the NERC Glossary

There are no revisions to defined terms associated with these standards.

Background

Project 2010-02 Connecting New Facilities to the Grid is implementing the recommendations that the FAC Five-Year Review Team made with respect to FAC-001 and FAC-002. The changes are largely focused on adding clarity, removing redundancy, retiring requirements with no impact on the reliable operation of the Bulk Electric System, and bringing compliance elements in accordance with NERC guidelines.

The changes should not require significant change in practice for entities, but acknowledging that some entities have lengthy approval processes for (inter)connection handbook or procedure revisions, one year was deemed reasonable for all applicable entities to implement the standards, including revisions to internal documents or procedures.

Applicable Entities

- Planning Coordinator (FAC-002-2)
- Transmission Planner (FAC-002-2)
- Transmission Owner (FAC-001-2 and FAC-002-2)
- Distribution Provider (FAC-002-2)
- Generator Owner (FAC-002-2)
- Applicable Generator Owner: Generator Owner with an executed Agreement to conduct a study to on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems. (FAC-001-2 and FAC-002-2)
- Load-Serving Entity

Effective Date

Both FAC-001-2 and FAC-002-2 shall become effective as follows:

The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

Retirements

FAC-001-1 and FAC-002-1 shall be retired at midnight of the day immediately prior to the effective date of FAC-001-2 and FAC-002-2 in the particular jurisdiction in which the new standard is becoming effective.

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NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Authorization Request Form

When completed, please email this form to:
sarcomm@nerc.com

NERC welcomes suggestions to improve the reliability of the Bulk-Power System through improved Reliability Standards. Please use this form to submit your request to propose a new or a revision to a NERC's Reliability Standard.

Request to propose a new or a revision to a Reliability Standard			
Title of Proposed Reliability Standard:	FAC-001-2 – Facility Interconnection Requirements and FAC-002-2 – Facility Interconnection Studies		
Date Finalized:	March 31, 2014		
SAR Requester Information			
Name:	The FAC Five-Year Review Team (Roster)		
Organization:	N/A		
Telephone:	N/A	E-mail:	N/A
SAR Type (Check as many as applicable)			
☐ New Reliability Standard ☒ Revision to existing Reliability Standards		☐ Withdrawal of existing Reliability Standard ☐ Urgent Action	

SAR Information
Industry Need (What is the industry problem this request is trying to solve?):
The Standards Committee assigned six subject matter experts to review the FAC family of Reliability Standards as part of NERC's obligation to conduct periodic reviews of its Reliability Standards. The Five-Year Review Team determined that FAC-001-1 and FAC-002-1 remain necessary for reliability to ensure that entities establish Facility connection requirements and then conduct assessments using those requirements before integrating new Facilities. Both Reliability Standards, however, require revision to refocus industry effort on those tasks that have a true impact on reliability.

SAR Information
Purpose or Goal (How does this request propose to address the problem described above?):
This SAR proposes revising FAC-001-1 and FAC-002-1 in line with the recommendations of the FAC Five-Year Review Team to add clarity, remove redundancy, retire requirements with no impact on the reliable operation of the Bulk Electric System (based on application of the Paragraph 81 criteria), and bring compliance elements in accordance with NERC guidelines.
Identify the Objectives of the proposed Reliability Standard's requirements (What specific reliability deliverables are required to achieve the goal?):
The objective of FAC-001-1 is to ensure that Transmission Owners and Generator Owners establish Facility requirements so that Facilities seeking interconnection will have the information necessary for considering and pursuing that interconnection. This objective supports reliability principle 3, which states that "information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably." The objective of FAC-002-1 is to ensure that the entities involved in the integration of new Facilities conduct assessments – using the connection requirements established in FAC-001-1 – before any interconnection occurs so that the interconnection is determined to be technically feasible and reliable. This objective supports reliability principle 1, which states that "interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards."
Brief Description (Provide a paragraph that describes the scope of this Reliability Standard action.)
FAC-001-1 should be revised to retire a requirement (R4) that is redundant with obligations already captured in the Rules of Procedure, to remove subparts of a requirement (R3) that are too prescriptive for inclusion in a Reliability Standard, and to remove parts of the requirement (R1) that are redundant or have no impact on reliability. The VRFs should also be modified for conformance with NERC's VRF guidelines. FAC-002-1 should be revised to make clear the responsibilities of the various entities to whom the Reliability Standard is applicable. R1 should also be revised to retire parts of the requirement that are redundant or have no impact on reliability.

SAR Information
It may be determined, during the execution of this project, that FAC-001-1 and FAC-002-1 should be combined into one Reliability Standard.
Detailed Description (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR. Also provide a justification for the development or revision of the Reliability Standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the Reliability Standard action.)
Per the *FAC Five-Year Review Team Recommendation to Revise FAC-001-1*, the drafting team should consider: • Revising the title and purpose of the Reliability Standard to reflect the language in the requirements. • Retiring the following reference in R1: "…compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements" because it is redundant with FAC-002-1, R1.2 and built into the ERO framework established in Order 672. • Retiring all of the subparts in R3, except for R3.1.1 and R3.1.2, and moving them to a guidance document. • Modifying R3 to ensure that the impact on third parties is appropriately addressed. • Retiring R4. • Modifying the VRFs for conformance with NERC's VRF guidelines. • Adding Time Horizons to each requirement. Per the *FAC Five-Year Review Team Recommendation to Revise FAC-002-1*, the drafting team should consider: • Revising the title and purpose of the Reliability Standard to reflect the language in the requirements. • Changing "Planning Authority" in the applicability section to "Planning Coordinator" to reflect the Functional Model, as well as the recently revised TPL-001-4. • Splitting R1 into three requirements to add clarity and better distinguish the actions required of the applicable entities. One requirement should describe the Transmission Planner and Planning Coordinators' responsibility for conducting assessments. A second requirement should describe

SAR Information
the Generator Owners' responsibility for coordinating and cooperating with the Transmission Planner and Planning Coordinator as those assessments are conducted. A third requirement should describe the Transmission Owners', Distribution Providers', and Load-Serving Entities' responsibility for coordinating and cooperating with the Transmission Planner and Planning Coordinator as those assessments are conducted. • Revising the subparts of R1 to remove elements that are more appropriate for Measures. • Modifying R1.1 to ensure that the impact on third parties is appropriately addressed. • Modifying R1.4 to update the reference to the TPL Reliability Standards to reflect the changes in proposed TPL-001-4. • Adding Time Horizons to each requirement.

Reliability Functions	
The Reliability Standards will Apply to the Following Functions (Check each one that applies.)	
☐ Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
☐ Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
☐ Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
☒ Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
☐ Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator area.
☒ Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.

Reliability Functions		
☐	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☒	Transmission Owner	Owns and maintains transmission facilities.
☐	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☒	Distribution Provider	Delivers electrical energy to the End-use customer.
☒	Generator Owner	Owns and maintains generation facilities.
☐	Generator Operator	Operates generation unit(s) to provide real and reactive power.
☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☐	Market Operator	Interface point for reliability functions with commercial functions.
☒	Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

Reliability and Market Interface Principles	
Applicable Reliability Principles (Check all that apply).	
☒	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards.
☐	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
☐	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
☐	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.

Reliability and Market Interface Principles	
☐	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☐	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
☐	8. Bulk power systems shall be protected from malicious physical or cyber attacks.

Does the proposed Reliability Standard comply with all of the following Market Interface Principles?	Enter (yes/no)
1. A Reliability Standard shall not give any market participant an unfair competitive advantage.	Yes
2. A Reliability Standard shall neither mandate nor prohibit any specific market structure.	Yes
3. A Reliability Standard shall not preclude market solutions to achieving compliance with that Reliability Standard.	Yes
4. A Reliability Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with Reliability Standards.	Yes

Related Reliability Standards	
Reliability Standard No.	Explanation
TPL Family	FAC-002-1, R1.4 references TPL-001-0, TPL-002-0, and TPL-003-0. R1.4 requires that assessments include: "Evidence that the assessment included steady-state, short-circuit, and dynamics studies as necessary to evaluate system performance under both normal and contingency conditions in accordance with Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0." These Reliability Standards have been revised and combined in TPL-001-4, which will become enforceable on January 1, 2015. The drafting team should ensure that this reference is updated to either refer to TPL-001-4 or TPL Reliability Standards more generically.

Related SARs – N/A	
SAR ID	Explanation

Regional Variances – N/A	
Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
RFC	
SERC	
SPP	
WECC	

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Standards Authorization Request Form

When completed, please email this form to:
sarcomm@nerc.com

NERC welcomes suggestions to improve the reliability of the Bulk-Power System through improved Reliability Standards. Please use this form to submit your request to propose a new or a revision to a NERC's Reliability Standard.

Request to propose a new or a revision to a Reliability Standard	
Title of Proposed Reliability Standard:	~~Connecting New Facilities to the Bulk Electric System (~~FAC-001-~~1~~2 – Facility ~~C~~Interconnection Requirements and FAC-002-2~~1~~ – ~~Coordination of Plans for New Generation, Transmission, and End-User Facilities)~~Facility Interconnection Studies
Date ~~Submitted~~Finalized:	~~December 3, 2013~~March 31, 2014

SAR Requester Information			
Name:	The FAC Five-Year Review Team (Roster)		
Organization:	N/A		
Telephone:	N/A	E-mail:	N/A

SAR Type (Check as many as applicable)	
☐ New Reliability Standard	☐ Withdrawal of existing Reliability Standard
☒ Revision to existing Reliability Standards	☐ Urgent Action

SAR Information
Industry Need (What is the industry problem this request is trying to solve?):
The Standards Committee assigned six subject matter experts to review the FAC family of Reliability Standards as part of NERC's obligation to conduct periodic reviews of its Reliability Standards. The Five-Year Review Team determined that FAC-001-1 and FAC-002-1 remain necessary for reliability to ensure

SAR Information
that entities establish Facility connection requirements and then conduct assessments using those requirements before integrating new Facilities. Both Reliability Standards, however, require revision to refocus industry effort on those tasks that have a true impact on reliability.
Purpose or Goal (How does this request propose to address the problem described above?):
This SAR proposes revising FAC-001-1 and FAC-002-1 in line with the recommendations of the FAC Five-Year Review Team to add clarity, remove redundancy, retire requirements with no impact on the reliable operation of the Bulk Electric System (based on application of the Paragraph 81 criteria), and bring compliance elements in accordance with NERC guidelines.
Identify the Objectives of the proposed Reliability Standard's requirements (What specific reliability deliverables are required to achieve the goal?):
The objective of FAC-001-1 is to ensure that Transmission Owners and Generator Owners establish Facility requirements so that Facilities seeking interconnection will have the information necessary for considering and pursuing that interconnection. This objective supports reliability principle 3, which states that "information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably." The objective of FAC-002-1 is to ensure that the entities involved in the integration of new Facilities conduct assessments – using the connection requirements established in FAC-001-1 – before any interconnection occurs so that the interconnection is determined to be technically feasible and reliable. This objective supports reliability principle 1, which states that "interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards."
Brief Description (Provide a paragraph that describes the scope of this Reliability Standard action.)
FAC-001-1 should be revised to retire a requirement (R4) that is redundant with obligations already captured in the Rules of Procedure, to remove subparts of a requirement (R3) that are too prescriptive for inclusion in a Reliability Standard, and to remove parts of the requirement (R1) that are redundant or have no impact on reliability. The VRFs should also be modified for conformance with NERC's VRF guidelines.

SAR Information
FAC-002-1 should be revised to make clear the responsibilities of the various entities to whom the Reliability Standard is applicable. R1 should also be revised to retire parts of the requirement that are redundant or have no impact on reliability. It may be determined, during the execution of this project, that FAC-001-1 and FAC-002-1 should be combined into one Reliability Standard.
Detailed Description (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR. Also provide a justification for the development or revision of the Reliability Standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the Reliability Standard action.)
Per the *FAC Five-Year Review Team Recommendation to Revise FAC-001-1*, the drafting team should consider: • Revising the title and purpose of the Reliability Standard to reflect the language in the requirements. • Retiring the following reference in R1: "…compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements" because it is redundant with FAC-002-1, R1.2 and built into the ERO framework established in Order 672. • Retiring all of the subparts in R3, except for R3.1.1 and R3.1.2, and moving them to a guidance document. • Modifying R3 to ensure that the impact on third parties is appropriately addressed. • Retiring R4. • Modifying the VRFs for conformance with NERC's VRF guidelines. • Adding Time Horizons to each requirement. Per the *FAC Five-Year Review Team Recommendation to Revise FAC-002-1*, the drafting team should consider: • Revising the title and purpose of the Reliability Standard to reflect the language in the requirements. • Changing "Planning Authority" in the applicability section to "Planning Coordinator" to reflect the Functional Model, as well as the recently revised TPL-001-4.

SAR Information
• Splitting R1 into three requirements to add clarity and better distinguish the actions required of the applicable entities. One requirement should describe the Transmission Planner and Planning Coordinators' responsibility for conducting assessments. A second requirement should describe the Generator Owners' responsibility for coordinating and cooperating with the Transmission Planner and Planning Coordinator as those assessments are conducted. A third requirement should describe the Transmission Owners', Distribution Providers', and Load-Serving Entities' responsibility for coordinating and cooperating with the Transmission Planner and Planning Coordinator as those assessments are conducted. • Revising the subparts of R1 to remove elements that are more appropriate for Measures. • Modifying R1.1 to ensure that the impact on third parties is appropriately addressed. • Modifying R1.4 to update the reference to the TPL Reliability Standards to reflect the changes in proposed TPL-001-4. • Adding Time Horizons to each requirement.

Reliability Functions	
The Reliability Standards will Apply to the Following Functions (Check each one that applies.)	
☐ Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
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☒ Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
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Reliability Functions		
☒	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
☐	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☒	Transmission Owner	Owns and maintains transmission facilities.
☐	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☒	Distribution Provider	Delivers electrical energy to the End-use customer.
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☐	Generator Operator	Operates generation unit(s) to provide real and reactive power.
☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☐	Market Operator	Interface point for reliability functions with commercial functions.
☒	Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

Reliability and Market Interface Principles	
Applicable Reliability Principles (Check all that apply).	
☒	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards.
☐	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
☐	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.

Reliability and Market Interface Principles	
☐	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
☐	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☐	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
☐	8. Bulk power systems shall be protected from malicious physical or cyber attacks.

Does the proposed Reliability Standard comply with all of the following Market Interface Principles?	Enter (yes/no)
1. A Reliability Standard shall not give any market participant an unfair competitive advantage.	Yes
2. A Reliability Standard shall neither mandate nor prohibit any specific market structure.	Yes
3. A Reliability Standard shall not preclude market solutions to achieving compliance with that Reliability Standard.	Yes
4. A Reliability Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with Reliability Standards.	Yes

Related Reliability Standards	
Reliability Standard No.	Explanation
TPL Family	FAC-002-1, R1.4 references TPL-001-0, TPL-002-0, and TPL-003-0. R1.4 requires that assessments include: "Evidence that the assessment included steady-state, short-circuit, and dynamics studies as necessary to evaluate system performance under both normal and contingency conditions in accordance with Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0." These Reliability Standards have been revised and combined in TPL-001-4, which will become enforceable on January 1, 2015. The drafting team should ensure that this reference is updated to either refer to TPL-001-4 or TPL Reliability Standards more generically.

Related SARs – N/A	
SAR ID	Explanation

Regional Variances – N/A	
Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
RFC	
SERC	
SPP	
WECC	

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RELIABILITY CORPORATION

Project 2010-02 – Connecting New Facilities to the Grid

Unofficial Comment Form

Instructions

Please **DO NOT** use this form for commenting. Please use the electronic comment form to submit comments on the proposed revisions to FAC-001-1 and FAC-002-1. Comments must be submitted by **May 15, 2014.** If you have questions please contact Standards Developer Mallory Huggins at mallory.huggins@nerc.net or by telephone at 202-644-8062.

Comment Form

Individual Commenter Information (Complete this page for comments from **one** organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region (check all Regions in which your company operates)	**Registered Ballot Body Segment (check all industry segments in which your company is registered)**	
☐ ERCOT ☐ FRCC ☐ MRO ☐ NPCC ☐ RFC ☐ SERC ☐ SPP ☐ WECC ☐ NA – Not Applicable	☐	1 — Transmission Owners
	☐	2 — RTOs and ISOs
	☐	3 — Load-serving Entities
	☐	4 — Transmission-dependent Utilities
	☐	5 — Electric Generators
	☐	6 — Electricity Brokers, Aggregators, and Marketers
	☐	7 — Large Electricity End Users
	☐	8 — Small Electricity End Users
	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)
Group Name:
Lead Contact:
Contact Organization:
Contact Segment:
Contact Telephone:
Contact E-mail:

Additional Member Name	Additional Member Organization	Region[1]	Segment[1]

[1] If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Additional Member Name	Additional Member Organization	Region[1]	Segment[1]

Background Information

Project 2010-02 Connecting New Facilities to the Grid is implementing the recommendations that the FAC Five-Year Review Team (FYRT) made with respect to FAC-001-1 and FAC-002-1. A Standard Authorization Request outlining the proposed changes to FAC-001-1 and FAC-002-1 was posted for an informal comment period from December 18, 2014 through January 17, 2014, and a standard drafting team was assigned by the Standards Committee on February 12, 2014.

In line with the recommendations of the FYRT, the SDT has proposed changes to add clarity, remove redundancy, retire requirements with no impact on the reliable operation of the Bulk Electric System (based on application of the Paragraph 81 criteria), and bring compliance elements in accordance with NERC guidelines. The SDT has also addressed SAR comments, Order 693 directives related to FAC-002-0, the recommendations of the Independent Experts Review Panel, Phase 1 Paragraph 81 suggestions, and the recommendations of the Integration of Variable Generation Task Force.

You do not have to answer all questions. Enter all comments in simple text format. Insert a check mark in the appropriate boxes by double-clicking the gray areas.

Questions

1. The SDT has proposed the following key revisions to FAC-001-2:
   - Revised the title and purpose to reflect the language in the requirements.
   - Removed the reference in R1 to: "…compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements" because it is redundant with FAC-002, R1.2.
   - Moved all of the subparts in R3, except for R3.1 and R3.2, and to the Guidelines and Technical Basis section. The SDT wants to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as subparts of R3 was deemed too prescriptive, as frequently some items in the list will not apply to all applicable entities – and some applicable entities will have requirements that expand upon the list. The Guidelines should be used as a starting point for each Transmission Owner and applicable Generator Owner to consider in the development of Facility interconnection requirements.
   - Modified R3 to ensure that the impact on third parties is appropriately addressed.
   - Retired R4.
   - Updated all compliance elements: updated the Measures to add examples of acceptable evidence; modified the VSLs for conformance with the updated requirement language; modified the VRFs for conformance with NERC's VRF guidelines; added Time Horizons to each requirement.

Do you agree with these revisions?

☐ Yes

☐ No

Comments:

2. The SDT has proposed the following key revisions to FAC-002:
   - Revised the title and purpose to reflect the language in the requirements.
   - Rearranged the order of Functional Entities in the Applicability section to reflect the order in the Functional Model; changed "Planning Authority" in the applicability section to "Planning Coordinator" to reflect the Functional Model, as well as the recently revised TPL-001-4; added "Applicable Generator Owner" to the Applicability section so that R4 does not require a reference to FAC-001
   - Separated R1 into four requirements to add clarity and better distinguish the actions required of the applicable entities.
   - Revised the subparts of R1 to remove elements that are more appropriate for Measures.
   - Modified R1.1 to ensure that the impact on third parties is appropriately addressed.

- Modified R1.4 to remove the reference to the TPL Reliability Standards to avoid redundancy with the R1.2 reference to "all NERC Reliability Standards."
- Updated all compliance elements: added Measures, VRFs, and Time Horizons to each requirement; modified the VSLs for conformance with the updated requirement language

Do you agree with these revisions?

☐ Yes

☐ No

Comments:

3. Do you agree with the timeline for implementation as proposed in the Implementation Plan?

☐ Yes

☐ No

Comments:

Consideration of Issues and Directives

Project 2010-02 – Connecting New Facilities to the Grid

Project 2010-02 – Connecting New Facilities to the Grid is implementing the recommendations that the FAC Five-Year Review Team (FYRT) made with respect to FAC-001-1 and FAC-002-1. The Standard Drafting Team (SDT) has proposed changes to add clarity, remove redundancy, retire requirements with no impact on the reliable operation of the Bulk Electric System, and bring compliance elements in accordance with NERC guidelines. Along with considering stakeholder comments as it proposed changes (see the Consideration of Comments form), the SDT considered Order 693 directives related to FAC-002-0, the recommendations of the Independent Experts Review Project, Phase 1 Paragraph 81 suggestions, and the recommendations of the Integration of Variable Generation Task Force

FERC Directives

There are two outstanding directives from FERC Order 693[1] that apply to FAC-002-0. The first directs NERC to consider incorporating a reference to TPL-004-0 in FAC-002-0. This directive is outdated. FERC has approved TPL-001-4 and it will become enforceable on January 1, 2015. Further, the SDT has proposed deleted any reference to TPL standards because it is redundant with the FAC-002-2, R1.2 requirement to evaluate compliance with all NERC Reliability Standards. To continue including a separate reference to TPL Reliability Standards is redundant and could lead to double jeopardy.

The second outstanding directive related to FAC-002-0 asked NERC to consider the comments of various entities asking for clarification of R1. For ease of review, the Project 2010-02 SDT has listed the comments of the various entities below, along with its response to those comments.

[1] FERC Order No. 693, which approved 83 Reliability Standards as mandatory and effective, is available here: http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/ORDER%20693.pdf.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
APPA requested that the Reliability Standard be clarified to state that the required assessment must be performed only by the Transmission Planner and the Planning Authority. Related, TAPS expressed concern that Load-Serving Entities are not equipped to perform assessments. California Cogeneration expressed a similar concern about Generator Owners' ability to perform an assessment.	FERC Order 693 Comment	The SDT is addressing these concerns by separating R1 into four requirements that better clarify the responsibilities of all entities involved. The new R1 focuses exclusively on the Transmission Planner and Planning Authority's responsibility for conducting studies, and the new R2, R3, and R4 separate out the requirement for Generator Owners, Transmission Owners, Distribution Providers, Load-Serving Entities, and applicable Generator Owners to simply coordinate and cooperate on those studies.
Xcel requested that the Commission clarify that only one required assessment needs to be done when new facilities are added, and that all the listed entities should participate in that single assessment.	FERC Order 693 Comment	The SDT agrees that it is possible that only one set of studies may be necessary, and in that case all entities could simply participate and sign on to the same set of studies, but in other cases, multiple sets of studies might be conducted and later coordinated.
FirstEnergy requested that NERC clarify what is considered a new facility and asks if, for example, up-rates should be included as new facilities.	FERC Order 693 Comment	The SDT believes the determination of whether an up-rate needs to be assessed the same way as a new Facility is up to the entity that is conducting the study, and that such decisions will vary by region.
Six Cities requested that this Reliability Standard clarify that all applicable entities must make available data necessary for all other responsible entities to perform the required assessment.	FERC Order 693 Comment	The SDT believes that the requirement to coordinate and cooperate requires the sharing of all data necessary for conducting a study. The SDT has modified the language of the proposed R2-R4 to add detail ("including but not limited to the provision of data") to clarify.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
Six Cities also suggested that the transmission operator be added as an entity to which this Reliability Standard is applicable, at least from the perspective that it make necessary data available to all other entities responsible for assessment.	FERC Order 693 Comment	The SDT believes that data from the Transmission Owner would account for the necessary data from the transmission side. It would be the responsibility of the Transmission Planner or Planning Authority to include any relevant operations data.
FirstEnergy stated that both MISO and PJM already have Large Generator Interconnection Procedures (LGIP) in place that provide a formal process that meets the requirements listed under R1, and asks that the Commission state that complying with the interconnection agreement and/or OATT satisfies this requirement.	FERC Order 693 Comment	The SDT points out that regardless of what is covered in a tariff, requirements for interconnecting new Facilities still need to be addressed in NERC's Reliability Standards. The requirement for Open Access Transmission Tariffs varies from region to region. FERC handles market-related documents like tariffs differently from reliability-related documents like standards, and reliability standards should not rely upon market-related documents to address reliability issues.

Independent Expert Review Project Recommendations

In the Final Report[2] and Requirements Scoring Spreadsheet[3], the Standards Independent Experts Review Project (IERP) continued to support the reliability need for both FAC-001 and FAC-002. The SDT implemented the majority of the IERP's recommendations, but is proposing some changes that are different from the IERP recommendations in some cases where industry expertise and consensus suggested a different solution.

[2] The Standards Independent Experts Review Project – Final Report is available here: http://www.nerc.com/pa/Stand/Standards%20Development%20Plan%20Library/Standards_Independent_Experts_Review_Project_Report.pdf.

[3] The Standards Independent Experts Review Project – Requirements Scoring Spreadsheet is available here: http://www.nerc.com/pa/Stand/Standards%20Development%20Plan%20Library/Standards_IERP_Requirements_Spreadsheet_August_29_2013.xls.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
FAC-001-1, R1: Word published is not clear	IERP	The SDT has changed requirement to "publish" be changed to "make available upon written request."
FAC-001-1, R1 and R2: Team had long discussion on the fact that FAC-001 requires the TO to publish the Facility connection requirements, but it does not put a requirement on anyone wanting to interconnect to meet the requirements in the Facility connection requirements. NERC should work with industry to see if an enforcement on entities wanting to interconnect should be added to the NERC standards.	IERP	The SDT does not believe such a change is necessary. FAC-002-1, R1.2 requires that studies of the impact of integrating new or materially modified Facilities evaluate compliance with NERC Reliability Standards; applicable regional and Transmission Owner planning criteria; and *Facility interconnection requirements.*
FAC-001-1, R3: R3: Streamline the items in 3.1 by removing- 3.1.1, 3.1.2, 3.1.3, 3.1.9, 3.1.11, 3.1.13, 3.1.15, 3.1.16	IERP	The SDT believes that all subparts except R3.1.1 and R3.1.2 are too prescriptive to include in a standard and has recommended retaining the subparts but moving them to a Guidelines and Technical Basis section.
FAC-001-1, R4: Administrative; should be deleted	IERP	The SDT agrees and has proposed deleting R4.
FAC-002-1, R1: Merge 1.1 and 1.4; retire 1.2, 1.3 and 1.5. The new 1.1 and 1.4 should say 'the assessment shall address requirements as identified in the FCR and the performance requirements as identified in the TPL stds."interconnection agreement and/or OATT satisfies this requirement.	IERP	Though the SDT does not agree with the specific recommendations of the IERP, the team agrees that there is room for improvement in the subparts of R1. The SDT has proposed modifications to R1.1-R1.5 for consistency and added clarity. The SDT recommends the original R1.3 be deleted and R1.5 modified to focus less on documentation and more on the content of the assessment. The SDT has also removed the

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
		reference to TPL standards because it was redundant with the reference to all NERC Reliability Standards in R1.2.
FAC-002-1, R1: "…applicable Regional requirements" language is not clear	IERP	The SDT believes that the list of standards and criteria that studies must consider catalogs some of the elements that must be considered in studies of a new interconnection. Some regions have specific requirements that may inform Facility interconnection requirements, and those should be considered.
FAC-001-1 and FAC-002-1: The IERP suggested a new construct be adopted by the ERO for NERC Reliability Standards. Under this construct, FAC-001 and FAC-002 would be combined with TPL-001, MOD-010, MOD-012, MOD-025, MOD-026, and MOD-027 to "Assess Transmission Future Needs and Develop Transmission Expansion Plans - Not Operational Planning." Has the Five Year Review Team considered this construct?	IERP	While the SDT supports this general direction, transition to this new framework is premature and would need to be carefully coordinated across a variety of projects.

Paragraph 81 Phase 1 Recommendations

During Phase 1 of the Paragraph 81 (P81) process, stakeholder were asked to make suggestions about future candidates for P81 retirement. Below, the standard drafting team (SDT) addresses the stakeholder suggestions from P81 Phase 1 that related to FAC-001 and FAC-002. Note that duplicate suggestions have been consolidated.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
FAC-001-0, R1 and R2: Retire R1 and R2; they relate to documentation	P81	While the SDT agrees that many documentation requirements are not related to reliability, the team believes that this FAC-001 is about more than documentation; it requires the *establishment* of Facility interconnection requirements. The development and documentation of these Facility interconnection requirements facilitates the studies that take place in FAC-002. Although Facility connection requirements for public utilities are typically covered in Open Access Transmission Tariffs (OATTs) under Sections 205 and 206 of the Federal Power Act, this leaves out electric utilities such as municipalities, cooperatives, and federal entities (e.g., the Bonneville Power Administration and the Tennessee Valley Authority), which are addressed under Section 215 of the Federal Power Act. OATTs also would not apply to non-jurisdictional entities that fall in NERC's footprint (e.g., Canadian entities). Ultimately, the SDT agreed that Facility interconnection requirements are necessary for reliability and should continue to be explicitly addressed in NERC standards.
FAC-002-1, R1: R1 assigns responsibility to the wrong functional entity	P81	The SDT believes this concern is addressed by separating R1 into four requirements that better clarify the responsibilities of all entities involved.

Integration of Variable Generation Task Force Recommendations

The Integration of Variable Generation Task Force (IVGTF), a task force under the Planning Committee, was asked to make recommendations for how NERC interconnection procedures and standards should be enhanced to address voltage and frequency ride-through, reactive and real power control, and frequency/inertial response criteria in light of the evolving range of technical characteristics and physical capabilities of variable generation equipment. The *2012 Special Assessment: Interconnection Requirements for Variable Generation*[4] includes several recommendations related to FAC-001.

The recommendations suggested adding additional detail to FAC-001, largely to account for the integration of variable generation, and they are generally inconsistent with the less-prescriptive direction of the SDT. Facility interconnection requirements are inherently inconsistent, and the proposed FAC-001-2 acknowledges that, while offering guidance (in the Guidelines and Technical Basis section) on the elements that should be considered for inclusion in Facility interconnection requirements. A Facility interconnection requirement standard cannot be too prescriptive about what must be included in a requirement because each Facility is different, and each Facility is subject to different regional and Transmission Owner Planning criteria. The SDT did accept the IVGTF's suggestion to add "including specifications for minimum static and dynamic reactive power requirements" to better describe the Reactive Power requirements in the "Voltage, Reactive Power, and power factor control bullet."

[4] The *2012 Special Assessment: Interconnection Requirements for Variable Generation* is available here: http://www.nerc.com/files/2012_IVGTF_Task_1-3.pdf.

Project 2010-02 – Connecting New Facilities to the Grid

Mapping Document

Proposed New Standards

- FAC-001-2 – Facility Interconnection Requirements
- FAC-002-2 – Facility Interconnection Studies

Proposed Retirements

- FAC-001-1 – Facility Connection Requirements
- FAC-002-1 – Coordination of Plans for New Generation, Transmission, and End-User Facilities

Background

Project 2010-02 Connecting New Facilities to the Grid is implementing the recommendations that the FAC Five-Year Review Team made with respect to FAC-001 and FAC-002. The changes are largely focused on adding clarity, removing redundancy, retiring requirements with no impact on the reliable operation of the Bulk Electric System, and bringing compliance elements in accordance with NERC guidelines.

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
R1. The Transmission Owner shall document, maintain, and publish Facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements. The Transmission	FAC-001-2, R1	R1 was revised in under FAC-001-2 to remove elements that are redundant with FAC-002 and clarify the actions required.

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
Owner's Facility connection requirements shall address connection requirements for: **R1.1.** Generation Facilities, **R1.2.** Transmission Facilities, and **R1.3.** End-user Facilities		
R2. Each applicable Generator Owner shall, within 45 days of having an executed Agreement to evaluate the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems (under FAC-002-1), document and publish its Facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements.	FAC-001-2, R2	R2 was revised in under FAC-001-2 to remove elements that are redundant with FAC-002 and clarify the actions required.
R3. Each Transmission Owner and each applicable Generator Owner (in accordance with Requirement R2) shall address the following items in its Facility connection requirements: **R3.1.** Provide a written summary of its plans to achieve the required system performance as	R3, R3.1.1, and R3.1.2 have been retained in R3 of FAC-001-2. The remaining subparts have been	The SDT wants to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as subparts of R3 was deemed too prescriptive, as frequently some items in the list will not apply to all applicable entities – and some applicable

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
described in Requirements R1 or R2 throughout the planning horizon: **R3.1.1.** Procedures for coordinated joint studies of new Facilities and their impacts on the interconnected Transmission systems. **R3.1.2.** Procedures for notification of new or modified Facilities to others (those responsible for the reliability of the interconnected Transmission systems) as soon as feasible. **R3.1.3.** Voltage level and MW and MVAR capacity or demand at point of connection. **R3.1.4.** Breaker duty and surge protection. **R3.1.5.** System protection and coordination. **R3.1.6.** Metering and telecommunications. **R3.1.7.** Grounding and safety issues.	transferred to the Guidelines and Technical Basis section of FAC-001-2.	entities will have requirements that expand upon the list. The Guidelines should be used as a starting point for each Transmission Owner and applicable Generator Owner to consider in the development of Facility interconnection requirements.

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
R3.1.8. Insulation and insulation coordination. **R3.1.9.** Voltage, Reactive Power, and power factor control. **R3.1.10.** Power quality impacts. **R3.1.11.** Equipment Ratings. **R3.1.12.** Synchronizing of Facilities. **R3.1.13.** Maintenance coordination. **R3.1.14.** Operational issues (abnormal frequency and voltages). **R3.1.15.** Inspection requirements for existing or new Facilities. **R3.1.16.** Communications and procedures during normal and emergency operating conditions.		
R4. The Transmission Owner shall maintain and update its Facility connection requirements as required. The Transmission Owner shall make documentation of these requirements available to the users of the transmission system, the Regional Entity, and ERO on request (five business days).	Retired	The requirement to maintain and update Facility connection requirements in Requirement R4 is contained in Requirement R1's proposed new language to "document, update as needed, and make available upon request." The second sentence of the current Requirement R4, which requires Transmission Owners to make documentation available, is redundant with the

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
		recommended changes to R1 and R2 under FAC-001-2. Further, requests to share data or information to Regional Entities and the ERO upon request are already addressed in Section 1600 of NERC's Rules of Procedure.

Standard: FAC-002		
Requirement in Approved Standard (FAC-002-1)	**Translation to New Standard or Other Action**	**Comments**
R1. The Generator Owner, Transmission Owner, Distribution Provider, and Load-Serving Entity seeking to integrate generation facilities, transmission facilities, and electricity end-user facilities shall each coordinate and cooperate on its assessments with its Transmission Planner and Planning Authority. The assessment shall include: **R1.1.** Evaluation of the reliability impact of the new facilities and their connections on the interconnected transmission systems. **R1.2.** Ensurance of compliance with NERC Reliability Standards and applicable Regional,	FAC-002-2 R1, R2, R3, and R4	R1 was separated into four requirements to add clarity and better distinguish the actions required of the applicable entities and revised the subparts to remove elements that are more appropriate for Measures, resulting in four subparts in FAC-002-2 rather than five. FAC-002-1 R1.1, R1.2, R1.4, and R1.5 have largely been retained in FAC-002-2 R1.1, R1.2, R1.3, and R1.4. The first sentence of FAC-002-1 R1.3 was deleted, and the second sentence was merged with the content of the new FAC-002-2 R1.4.

Standard: FAC-002		
Requirement in Approved Standard (FAC-002-1)	**Translation to New Standard or Other Action**	**Comments**
subregional, Power Pool, and individual system planning criteria and facility connection requirements. **R1.3.** Evidence that the parties involved in the assessment have coordinated and cooperated on the assessment of the reliability impacts of new facilities on the interconnected transmission systems. While these studies may be performed independently, the results shall be jointly evaluated and coordinated by the entities involved. **R1.4.** Evidence that the assessment included steady-state, short-circuit, and dynamics studies as necessary to evaluate system performance under both normal and contingency conditions in accordance with Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0. **R1.5.** Documentation that the assessment included study assumptions, system performance, alternatives considered, and jointly coordinated recommendations.		

Standard: FAC-002		
Requirement in Approved Standard (FAC-002-1)	**Translation to New Standard or Other Action**	**Comments**
R2. The Planning Authority, Transmission Planner, Generator Owner, Transmission Owner, Load-Serving Entity, and Distribution Provider shall each retain its documentation (of its evaluation of the reliability impact of the new facilities and their connections on the interconnected transmission systems) for three years and shall provide the documentation to the Regional Reliability Organization(s) and NERC on request (within 30 calendar days). (Retirement approved by FERC effective January 21, 2014.)	Retired	FAC-002-1, R2 has been deleted in the current version of FAC-002 because it was approved by FERC for retirement effective January 21, 2014.

Project 2010-02: Connecting New Facilities to the Grid

VRF and VSL Justifications for FAC-001-2 and FAC-002-2

VRF and VSL Justifications – FAC-001-2, R1	
Proposed VRF	Lower
NERC VRF Discussion	While necessary for reliability, the requirements in FAC-001 are administrative in nature and take place in the planning horizon. A violation of FAC-001, R1 would not be expected to adversely affect the electrical state or capability of the Bulk Electric System or the ability to effectively monitor, control, or restore the Bulk Electric System.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Subparts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* R3 of FAC-003-2, which requires documented maintenance strategies or procedures or processes or specifications and takes place in the planning horizon, is also assigned a Lower VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See “NERC VRF Discussion” above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the obligations that are co-mingled in the requirement have equal reliability risk objectives.
Proposed Lower VSL	N/A
Proposed Moderate VSL	The Transmission Owner documented Facility interconnection requirements and updated them as needed, but failed to make them available upon request. OR The Transmission Owner documented Facility interconnection requirements and made them available upon request, but failed to update them as needed.

VRF and VSL Justifications – FAC-001-2, R1	
	OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for one of the Facilities as specified in R1.1, R1.2, or R1.3.
Proposed High VSL	The Transmission Owner documented Facility interconnection requirements, but failed to update them as needed and make them available upon request. OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for two of the Facilities as specified in R1.1, R1.2, or R1.3.
Proposed Severe VSL	The Transmission Owner did not document Facility interconnection requirements.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.

VRF and VSL Justifications – FAC-001-2, R1	
Should Not Contain Ambiguous Language	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-001-2, R2	
Proposed VRF	Lower
NERC VRF Discussion	While necessary for reliability, the requirements in FAC-001 are administrative in nature and take place in the planning horizon. A violation of FAC-001, R2 would not be expected to adversely affect the electrical state or capability of the Bulk Electric System or the ability to effectively monitor, control, or restore the Bulk Electric System.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Subparts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* R3 of FAC-003-2, which requires documented maintenance strategies or procedures or processes or specifications and takes place in the planning horizon, is also assigned a Lower VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the obligations that are co-mingled in the requirement have equal reliability risk objectives.
Proposed Lower VSL	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 45 calendar days but less than or equal to 60 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.
Proposed Moderate VSL	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 60 calendar days but less than or equal to 70 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.

VRF and VSL Justifications – FAC-001-2, R2	
Proposed High VSL	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 70 calendar days but less than or equal to 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.
Proposed Severe VSL	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 80 days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.

VRF and VSL Justifications – FAC-001-2, R2	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-001-2, R3	
Proposed VRF	Lower
NERC VRF Discussion	While necessary for reliability, the requirements in FAC-001 are administrative in nature and take place in the planning horizon. A violation of FAC-001, R3 would not be expected to adversely affect the electrical state or capability of the Bulk Electric System or the ability to effectively monitor, control, or restore the Bulk Electric System.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Subparts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* R3 of FAC-003-2, which requires documented maintenance strategies or procedures or processes or specifications and takes place in the planning horizon, is also assigned a Lower VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the obligations that are co-mingled in the requirement have equal reliability risk objectives.
Proposed Lower VSL	N/A
Proposed Moderate VSL	N/A
Proposed High VSL	The Transmission Owner or applicable Generator Owner addressed either R3.1 or R3.2 in its Facility interconnection requirements, but did not address both.
Proposed Severe VSL	The Transmission Owner or applicable Generator Owner addressed neither R3.1 nor R3.2 in its Facility interconnection requirements.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.

VRF and VSL Justifications – FAC-001-2, R3	
the Current Level of Compliance	
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R1	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly conduct studies on the reliability impact of integrating new or materially modified Facilities, and the other Facilities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Subparts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The Transmission Planner or Planning Coordinator conducted studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities but failed to include in its studies one of the parts in R1.1-R1.4.
Proposed Moderate VSL	The Transmission Planner or Planning Coordinator conducted studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities but failed to include in its studies two of the parts in R1.1-R1.4.
Proposed High VSL	The Transmission Planner or Planning Coordinator conducted studies on the reliability impact of integrating new or materially modified

VRF and VSL Justifications – FAC-002-2, R1	
	generation, transmission, or electricity end-user Facilities but failed to include in its studies three of the parts in R1.1-R1.4.
Proposed Severe VSL	The Transmission Planner or Planning Coordinator failed to conduct studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R1	
on A Single Violation, Not on A Cumulative Number of Violations	

VRF and VSL Justifications – FAC-002-2, R2	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly conduct studies on the reliability impact of integrating new or materially modified Facilities, and the other Facilities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Subparts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The Generator Owner seeking to interconnect generation Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the parts in R.1-R1.4.
Proposed Moderate VSL	The Generator Owner seeking to interconnect generation Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the parts in R.1-R1.4.
Proposed High VSL	The Generator Owner seeking to interconnect generation Facilities coordinated and cooperated on studies with its Transmission Planner

VRF and VSL Justifications – FAC-002-2, R2	
	or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the parts in R.1-R1.4.
Proposed Severe VSL	The Generator Owner seeking to interconnect generation Facilities failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R2	
on A Single Violation, Not on A Cumulative Number of Violations	

VRF and VSL Justifications – FAC-002-2, R3	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly conduct studies on the reliability impact of integrating new or materially modified Facilities, and the other Facilities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Subparts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the parts in R.1-R1.4.
Proposed Moderate VSL	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide

VRF and VSL Justifications – FAC-002-2, R3	
	data necessary to perform studies as described in two of the parts in R.1-R1.4.
Proposed High VSL	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the parts in R.1-R1.4.
Proposed Severe VSL	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.
FERC VSL G3	The language of the VSL directly mirrors the language in the corresponding requirement.

VRF and VSL Justifications – FAC-002-2, R3	
Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R4	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly conduct studies on the reliability impact of integrating new or materially modified Facilities, and the other Facilities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Subparts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See “NERC VRF Discussion” above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in one of the parts in R.1-R1.4.
Proposed Moderate VSL	The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in two of the parts in R.1-R1.4.

VRF and VSL Justifications – FAC-002-2, R4	
Proposed High VSL	The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in three of the parts in R.1-R1.4.
Proposed Severe VSL	The Transmission Owner or applicable Generator Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.

VRF and VSL Justifications – FAC-002-2, R4	
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

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Standards Announcement

Project 2010-02 Connecting New Facilities to the Grid FAC-001-1 and FAC-002-1

Initial Ballots and Non-Binding Polls Now Open through May 15, 2014

Now Available

Initial ballots for **FAC-001-2 – Facility Interconnection Requirements** and **FAC-002-2 – Facility Interconnection Studies** and non-binding polls of the associated Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) are now open through **8 p.m. Eastern on Thursday, May 15, 2014**.

Background information for this project can be found on the project page.

Instructions for Balloting

Members of the ballot pools associated with this project may log in and submit their vote for the standards and non-binding polls of the associated VRFs and VSLs by clicking here.

Next Steps

The ballot results will be announced and posted on the project page. The drafting team will consider all comments received during the formal comment period and, if needed, make revisions to the standards. If the comments do not show the need for significant revisions, the standards will proceed to a final ballot.

For information on the **Standards Development Process**, please refer to the Standard Processes Manual.

For more information or assistance, please contact Wendy Muller, Standards Development Administrator, or at 404-446-2560.

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Standards Announcement

Project 2010-02 Connecting New Facilities to the Grid FAC-001-1 and FAC-002-1

Ballot Pools Forming through May 1, 2014
Formal Comment Period Now Open through May 15, 2014

Upcoming:
Ballot and Non-Binding Polls: May 6-15, 2014

Now Available

A formal comment period for **FAC-001-2 – Facility Interconnection Requirements** and **FAC-002-2 – Facility Interconnection Studies** is open through **8 p.m. Eastern on Thursday, May 15, 2014** and ballot pools are forming through 8 p.m. Eastern on Thursday, May 1, 2014.

Background information for this project can be found on the project page.

Instructions for Joining Ballot Pools

Ballots pools are being formed for the standards and non-binding polls for FAC-001-2 and FAC-002-2. Registered Ballot Body members must join both ballot pools to be eligible to vote in the balloting of FAC-001-2 and FAC-002-2 and to submit an opinion for the non-binding polls of the associated VRFs and VSLs. Registered Ballot Body members may join the ballot pools at the following page: Join Ballot Pool.

During the pre-ballot window, members of the ballot pool may communicate with one another by using their "ballot pool list server." (Once the balloting begins, ballot pool members are prohibited from using the ballot pool list servers.) The list servers for this project are:

Ballot for FAC-001-2 & FAC-002-2: bp-2010-02_FAC-001-1_in@nerc.com
bp-2010-02-1_FAC-002-1_in@nerc.com

Non-Binding Poll for FAC-001-2 & FAC-002-2: bp-2010-02_FAC-001-1_NB_in@nerc.com
bp-2010-02_FAC-002-1_NB_in@nerc.com

Instructions for Commenting

Please use the electronic form to submit comments on the revised definition. If you experience any difficulties in using the electronic form, please contact Wendy Muller. An off-line, unofficial copy of the comment form is posted on the project page.

Next Steps

An initial ballot period for the standards and non-binding polls of the associated Violation Risk Factors and Violation Severity Levels will be conducted May 6-15, 2014.

For information on the **Standards Development Process**, please refer to the Standard Processes Manual.

For more information or assistance, please contact Wendy Muller, Standards Development Administrator, or at 404-446-2560.

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Standards Announcement

Project 2010-02 Connecting New Facilities to the Grid FAC-001-1 and FAC-002-1

Ballot Pools Forming through May 1, 2014
Formal Comment Period Now Open through May 15, 2014

Upcoming:
Ballot and Non-Binding Polls: May 6-15, 2014

Now Available

A formal comment period for **FAC-001-2 – Facility Interconnection Requirements** and **FAC-002-2 – Facility Interconnection Studies** is open through **8 p.m. Eastern on Thursday, May 15, 2014** and ballot pools are forming through 8 p.m. Eastern on Thursday, May 1, 2014.

Background information for this project can be found on the project page.

Instructions for Joining Ballot Pools

Ballots pools are being formed for the standards and non-binding polls for FAC-001-2 and FAC-002-2. Registered Ballot Body members must join both ballot pools to be eligible to vote in the balloting of FAC-001-2 and FAC-002-2 and to submit an opinion for the non-binding polls of the associated VRFs and VSLs. Registered Ballot Body members may join the ballot pools at the following page: Join Ballot Pool.

During the pre-ballot window, members of the ballot pool may communicate with one another by using their "ballot pool list server." (Once the balloting begins, ballot pool members are prohibited from using the ballot pool list servers.) The list servers for this project are:

Ballot for FAC-001-2 & FAC-002-2: bp-2010-02_FAC-001-1_in@nerc.com
bp-2010-02-1_FAC-002-1_in@nerc.com

Non-Binding Poll for FAC-001-2 & FAC-002-2: bp-2010-02_FAC-001-1_NB_in@nerc.com
bp-2010-02_FAC-002-1_NB_in@nerc.com

Instructions for Commenting

Please use the electronic form to submit comments on the revised definition. If you experience any difficulties in using the electronic form, please contact Wendy Muller. An off-line, unofficial copy of the comment form is posted on the project page.

Next Steps

An initial ballot period for the standards and non-binding polls of the associated Violation Risk Factors and Violation Severity Levels will be conducted May 6-15, 2014.

For information on the **Standards Development Process**, please refer to the Standard Processes Manual.

For more information or assistance, please contact Wendy Muller, Standards Development Administrator, or at 404-446-2560.

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Standards Announcement

Project 2010-02 Connecting New Facilities to the Grid

Ballot and Non-Binding Poll Results

Now Available

Ballots for **FAC-001-2 (Facility Interconnection Requirements) and FAC-002-2 (Facility Interconnection Studies)** and non-binding polls of the associated Violation Risk Factors and Violation Severity Levels concluded at **8 p.m. Eastern on Friday, May 16, 2014**.

The standards achieved a quorum and received sufficient affirmative votes for approval. Voting statistics are listed below, and the Ballot Results page provides a link to the detailed results for the ballots.

	Ballot Results	Non-Binding Poll Results
	Quorum /Approval	Quorum/Supportive Opinions
FAC-001-2	85.79% / 79.08%	83.52% / 85.52%
FAC-002-2	86.28% / 78.81%	83.29% / 86.03%

Background information for this project can be found on the project page.

Next Steps

The drafting team will consider all comments received during the formal comment period and, if needed, make revisions to the standards. If the comments do not show the need for significant revisions, the standards will proceed to a final ballot.

For information on the **Standards Development Process**, please refer to the Standard Processes Manual.

For more information or assistance, please contact Wendy Muller (via email), Standards Development Administrator, or at 404-446-2560.

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Ballot Results	
Ballot Name:	Project 2010-02 Facilities Interconnection FAC-001-2
Ballot Period:	5/6/2014 - 5/16/2014
Ballot Type:	Initial
Total # Votes:	344
Total Ballot Pool:	401
Quorum:	**85.79 % The Quorum has been reached**
Weighted Segment Vote:	79.08 %
Ballot Results:	**The ballot has closed**

Summary of Ballot Results

Segment	Ballot Pool	Segment Weight	Affirmative # Votes	Affirmative Fraction	Negative # Votes	Negative Fraction	Negative Vote without a Comment	Abstain	No Vote
1 - Segment 1	110	1	64	0.78	18	0.22	0	12	16
2 - Segment 2	9	0.6	5	0.5	1	0.1	0	3	0
3 - Segment 3	85	1	55	0.833	11	0.167	0	10	9
4 - Segment 4	31	1	17	0.68	8	0.32	0	4	2
5 - Segment 5	91	1	49	0.831	10	0.169	0	11	21
6 - Segment 6	56	1	40	0.833	8	0.167	0	2	6
7 - Segment 7	2	0.2	2	0.2	0	0	0	0	0
8 - Segment 8	5	0.3	3	0.3	0	0	0	0	2
9 - Segment 9	3	0.2	0	0	2	0.2	0	0	1

10 - Segment 10	9	0.6	5	0.5	1	0.1	0	3	0
Totals	**401**	**6.9**	**240**	**5.457**	**59**	**1.443**	**0**	**45**	**57**

Individual Ballot Pool Results

Segment	Organization	Member	Ballot	NERC Notes
1	Ameren Services	Eric Scott	Negative	SUPPORTS THIRD PARTY COMMENTS - (Ameren)
1	American Electric Power	Paul B Johnson	Negative	SUPPORTS THIRD PARTY COMMENTS - (Tom Foltz - AEP)
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman		
1	Austin Energy	James Armke	Affirmative	
1	Avista Utilities	Heather Rosentrater	Affirmative	
1	Balancing Authority of Northern California	Kevin Smith	Affirmative	
1	Baltimore Gas & Electric Company	Christopher J Scanlon	Affirmative	
1	Basin Electric Power Cooperative	David Rudolph		
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	
1	Black Hills Corp	Wes Wingen	Abstain	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Affirmative	
1	Central Electric Power Cooperative	Michael B Bax	Affirmative	
1	Central Iowa Power Cooperative	Kevin J Lyons	Negative	SUPPORTS THIRD PARTY COMMENTS - (CIPCO supports the comments submitted by ACES)
1	Central Maine Power Company	Joseph Turano Jr.	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Tallahassee	Daniel S Langston	Affirmative	
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel		
1	Colorado Springs Utilities	Shawna Speer	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	CPS Energy	Glenn Pressler	Affirmative	
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Deseret Power	James Tucker	Abstain	
1	Dominion Virginia Power	Larry Nash	Negative	SUPPORTS THIRD PARTY COMMENTS - (Dominion)
1	Duke Energy Carolina	Doug E Hils	Affirmative	
1	Empire District Electric Co.	Ralph F Meyer	Affirmative	
1	Encari	Steven E Hamburg		
1	Entergy Transmission	Oliver A Burke	Affirmative	
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton		
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	FortisBC	Curtis Klashinsky		
				SUPPORTS THIRD PARTY COMMENTS -

1	Gainesville Regional Utilities	Richard Bachmeier	Negative	(Florida Municipal Power Agency)
1	Georgia Transmission Corporation	Jason Snodgrass	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Muhammed Ali	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC RSC)
1	Hydro-Quebec TransEnergie	Martin Boisvert	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
1	Idaho Power Company	Molly Devine	Abstain	
1	International Transmission Company Holdings Corp	Michael Moltane	Abstain	
1	JDRJC Associates	Jim D Cyrulewski	Affirmative	
1	JEA	Ted E Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon		
1	Kansas City Power & Light Co.	Daniel Gibson	Affirmative	
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency (FMPA))
1	Lee County Electric Cooperative	John Chin	Abstain	
1	Lincoln Electric System	Doug Bantam		
1	Long Island Power Authority	Robert Ganley		
1	Los Angeles Department of Water & Power	John Burnett	Abstain	
1	Lower Colorado River Authority	Martyn Turner	Affirmative	
1	M & A Electric Power Cooperative	William Price	Affirmative	
1	Manitoba Hydro	Jo-Anne M Ross	Negative	COMMENT RECEIVED
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	Minnkota Power Coop. Inc.	Daniel L Inman	Affirmative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Affirmative	
1	National Grid USA	Michael Jones	Negative	SUPPORTS THIRD PARTY COMMENTS - (National Grid supports NPCC's comments.)
1	NB Power Corporation	Alan MacNaughton	Abstain	
1	New York Power Authority	Bruce Metruck	Affirmative	
1	Northeast Missouri Electric Power Cooperative	Kevin White		
1	Northeast Utilities	William Temple	Affirmative	
1	Northern Indiana Public Service Co.	Julaine Dyke	Affirmative	
1	NorthWestern Energy	John Canavan	Affirmative	
1	Ohio Valley Electric Corp.	Scott R Cunningham	Negative	SUPPORTS THIRD PARTY COMMENTS- Thomas Foltz of American Electric Power.
1	Oklahoma Gas and Electric Co.	Terri Pyle	Affirmative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Affirmative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson	Affirmative	
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan	Affirmative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	John T Walker	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	

1	Public Service Company of New Mexico	Laurie Williams	Abstain	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Puget Sound Energy, Inc.	Denise M Lietz	Abstain	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	San Diego Gas & Electric	Will Speer		
1	SaskPower	Wayne Guttormson		
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Seminole Electric Cooperative, Inc.	Glenn Spurlock	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens		
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South Carolina Electric & Gas Co.	Tom Hanzlik	Abstain	
1	South Carolina Public Service Authority	Shawn T Abrams	Abstain	
1	Southern California Edison Company	Steven Mavis	Negative	SUPPORTS THIRD PARTY COMMENTS - (P. Farrell - Southern California Edison Co..)
1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Tampa Electric Co.	Beth Young	Affirmative	
1	Tennessee Valley Authority	Howell D Scott	Affirmative	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State Generation & Transmission Association, Inc.	Tracy Sliman	Negative	COMMENT RECEIVED
1	Tucson Electric Power Co.	John Tolo	Affirmative	
1	U.S. Bureau of Reclamation	Richard T Jackson	Affirmative	
1	United Illuminating Co.	Jonathan Appelbaum	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
1	Vermont Electric Power Company, Inc.	Kim Moulton	Affirmative	
1	Westar Energy	Allen Klassen	Affirmative	
1	Western Area Power Administration	Lloyd A Linke	Affirmative	
1	Wolverine Power Supply Coop., Inc.	Michelle Clements	Abstain	
1	Xcel Energy, Inc.	Gregory L Pieper	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Rich Vine	Abstain	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Affirmative	
2	Independent Electricity System Operator	Leonard Kula	Affirmative	
2	ISO New England, Inc.	Matthew F Goldberg	Abstain	
2	MISO	Marie Knox	Affirmative	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	stephanie monzon	Affirmative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Negative	COMMENT RECEIVED
3	AEP	Michael E Deloach	Negative	SUPPORTS THIRD PARTY COMMENTS - (Thomas Foltz - American Electric Power)
3	Alabama Power Company	Robert S Moore	Affirmative	
3	Ameren Corp.	David J Jendras	Negative	COMMENT RECEIVED
3	APS	Sarah Kist	Affirmative	

3	Associated Electric Cooperative, Inc.	Todd Bennett	Affirmative	
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	Avista Corp.	Scott J Kinney	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blue Ridge Electric	James L Layton	Abstain	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Power Cooperative	Adam M Weber	Affirmative	
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Clewiston	Lynne Mila	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)
3	City of Farmington	Linda R Jacobson	Abstain	
3	City of Green Cove Springs	Mark Schultz		
3	City of Redding	Bill Hughes	Affirmative	
3	City of Tallahassee	Bill R Fowler	Affirmative	
3	Colorado Springs Utilities	Jean Mueller	Affirmative	
3	ComEd	John Bee	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy Company	Gerald G Farringer	Abstain	
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla	Affirmative	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Dominion Resources, Inc.	Connie B Lowe	Negative	SUPPORTS THIRD PARTY COMMENTS - (See Dominion submitted comments)
3	DTE Electric	Kent Kujala	Abstain	
3	El Paso Electric Company	Rhonda Bryant		
3	FirstEnergy Corp.	Cindy E Stewart	Affirmative	
3	Florida Keys Electric Cooperative	Tom B Anthony	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Negative	COMMENT RECEIVED
3	Florida Power & Light Co.	Summer C. Esquerre	Affirmative	
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Affirmative	
3	Hydro One Networks, Inc.	Ayesha Sabouba	Negative	COMMENT RECEIVED
3	JEA	Garry Baker	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Affirmative	
3	Kansas City Power & Light Co.	Joshua D Bach	Affirmative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lee County Electric Cooperative	David A Hadzima		
3	Lincoln Electric System	Jason Fortik		
3	Los Angeles Department of Water & Power	Mike Anctil	Abstain	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	
3	M & A Electric Power Cooperative	Stephen D Pogue	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Negative	COMMENT RECEIVED
3	MEAG Power	Roger Brand	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Modesto Irrigation District	Jack W Savage		
3	Muscatine Power & Water	John S Bos	Affirmative	
3	National Grid USA	Brian E Shanahan	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC RSC)
3	Nebraska Public Power District	Tony Eddleman	Affirmative	
3	New York Power Authority	David R Rivera	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann		
3	Northern Indiana Public Service Co.	Ramon J Barany	Affirmative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Affirmative	
3	Ocala Utility Services	Randy Hahn	Negative	SUPPORTS THIRD PARTY COMMENTS -

				(FMPA)
3	Oklahoma Gas and Electric Co.	Donald Hargrove	Affirmative	
3	Omaha Public Power District	Blaine R. Dinwiddie	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	Owensboro Municipal Utilities	Thomas T Lyons	Affirmative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	PNM Resources	Michael Mertz	Abstain	
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Potomac Electric Power Co.	Mark Yerger	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Puget Sound Energy, Inc.	Mariah R Kennedy	Abstain	
3	Rutherford EMC	Thomas Haire	Abstain	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Abstain	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas		
3	Snohomish County PUD No. 1	Mark Oens	Affirmative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Affirmative	
3	Southern California Edison Company	Lujuanna Medina	Negative	SUPPORTS THIRD PARTY COMMENTS - (SCE's comments)
3	Tacoma Power	Marc Donaldson	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Affirmative	
3	Tri-State Generation & Transmission Association, Inc.	Janelle Marriott	Negative	COMMENT RECEIVED
3	Westar Energy	Bo Jones	Affirmative	
3	Wisconsin Electric Power Marketing	James R Keller	Affirmative	
3	Xcel Energy, Inc.	Michael Ibold	Affirmative	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Abstain	
4	Constellation Energy Control & Dispatch, L.L.C.	Margaret Powell	Affirmative	
4	Consumers Energy Company	Tracy Goble	Abstain	
4	Cowlitz County PUD	Rick Syring	Affirmative	
4	DTE Electric	Daniel Herring	Abstain	
4	Flathead Electric Cooperative	Russ Schneider	Affirmative	
4	Florida Municipal Power Agency	Frank Gaffney	Negative	COMMENT RECEIVED
4	Fort Pierce Utilities Authority	Cairo Vanegas	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Herb Schrayshuen	Herb Schrayshuen	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative	
4	Indiana Municipal Power Agency	Jack Alvey	Negative	SUPPORTS THIRD PARTY COMMENTS - (Support comments submitted by Florida Municipal Power Agency (FMPA))
4	Integrys Energy Group, Inc.	Christopher Plante	Affirmative	

4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	
4	Modesto Irrigation District	Spencer Tacke	Negative	COMMENT RECEIVED
4	North Carolina Electric Membership Corp.	John Lemire	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES Power)
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Abstain	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	South Mississippi Electric Power Association	Steve McElhaney	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Utility Services, Inc.	Brian Evans-Mongeon	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
4	Wisconsin Energy Corp.	Anthony Jankowski		
4	WPPI Energy	Todd Komplin		
5	Amerenue	Sam Dwyer	Negative	SUPPORTS THIRD PARTY COMMENTS - (Ameren comments)
5	American Electric Power	Thomas Foltz	Negative	COMMENT RECEIVED
5	Arizona Public Service Co.	Scott Takinen	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Affirmative	
5	Avista Corp.	Steve Wenke		
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
5	Black Hills Corp	George Tatar		
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Calpine Corporation	Hamid Zakery		
5	City and County of San Francisco	Daniel Mason	Affirmative	
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Redding	Paul A. Cummings	Affirmative	
5	City of Tallahassee	Karen Webb	Affirmative	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman		
5	Cogentrix Energy Power Management, LLC	Mike D Hirst		
5	Colorado Springs Utilities	Kaleb Brimhall	Affirmative	
5	Con Edison Company of New York	Brian O'Boyle	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Abstain	
5	Cowlitz County PUD	Bob Essex	Affirmative	
5	Dairyland Power Coop.	Tommy Drea	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Negative	SUPPORTS THIRD PARTY COMMENTS - (Dominion)
5	DTE Electric	Mark Stefaniak		
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	EDP Renewables North America LLC	Heather Bowden	Abstain	
5	El Paso Electric Company	Gustavo Estrada		
5	Electric Power Supply Association	John R Cashin		
5	Entergy Services, Inc.	Tracey Stubbs	Affirmative	
5	Exelon Nuclear	Mark F Draper	Affirmative	
5	First Wind	John Robertson		

5	FirstEnergy Solutions	Kenneth Dresner		
5	Florida Municipal Power Agency	David Schumann	Negative	COMMENT RECEIVED
5	Great River Energy	Preston L Walsh	Affirmative	
5	Hydro-Québec Production	Roger Dufresne	Abstain	
5	Ingleside Cogeneration LP	Michelle R DAntuono	Affirmative	
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Affirmative	
5	Kissimmee Utility Authority	Mike Blough	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
5	Lakeland Electric	James M Howard	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
5	Liberty Electric Power LLC	Daniel Duff	Affirmative	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver	Abstain	
5	Lower Colorado River Authority	Dixie Wells	Affirmative	
5	Luminant Generation Company LLC	Rick Terrill	Affirmative	
5	Manitoba Hydro	Chris Mazur	Negative	COMMENT RECEIVED
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Affirmative	
5	New York Power Authority	Wayne Sipperly	Affirmative	
5	NextEra Energy	Allen D Schriver	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Northern Indiana Public Service Co.	Michael D Melvin		
5	Oglethorpe Power Corporation	Bernard Johnson	Affirmative	
5	Oklahoma Gas and Electric Co.	Henry L Staples	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard K Kinas		
5	Pacific Gas and Electric Company	Alex Chua	Affirmative	
5	Platte River Power Authority	Christopher R Wood	Affirmative	
5	Portland General Electric Co.	Matt E. Jastram		
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	PSEG Fossil LLC	Tim Kucey	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega		
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Abstain	
5	Puget Sound Energy, Inc.	Lynda Kupfer	Abstain	
5	Sacramento Municipal Utility District	Susan Gill-Zobitz	Affirmative	
5	Salt River Project	William Alkema	Affirmative	
5	Santee Cooper	Lewis P Pierce	Abstain	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins		
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic		
5	Southern California Edison Company	Denise Yaffe		
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tacoma Power	Chris Mattson	Affirmative	
5	Tampa Electric Co.	RJames Rocha		
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	Tri-State Generation & Transmission Association, Inc.	Mark Stein	Negative	COMMENT RECEIVED
5	U.S. Army Corps of Engineers	Melissa Kurtz	Abstain	
5	USDI Bureau of Reclamation	Erika Doot	Affirmative	

5	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman		
5	Westar Energy	Bryan Taggart	Affirmative	
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative	
5	Wisconsin Public Service Corp.	Scott E Johnson	Affirmative	
5	WPPI Energy	Steven Leovy		
5	Xcel Energy, Inc.	Mark A Castagneri		
6	AEP Marketing	Edward P. Cox	Negative	SUPPORTS THIRD PARTY COMMENTS - (Tom Foltz - AEP)
6	Ameren Missouri	Robert Quinlivan	Negative	COMMENT RECEIVED
6	APS	Randy A. Young	Affirmative	
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa Martin	Affirmative	
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirchak		
6	Colorado Springs Utilities	Shannon Fair	Affirmative	
6	Con Edison Company of New York	David Balban	Affirmative	
6	Constellation Energy Commodities Group	David J Carlson	Affirmative	
6	Dominion Resources, Inc.	Louis S. Slade	Negative	SUPPORTS THIRD PARTY COMMENTS - (Dominion)
6	Duke Energy	Greg Cecil	Affirmative	
6	FirstEnergy Solutions	Kevin Querry	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative	COMMENT RECEIVED
6	Florida Municipal Power Pool	Thomas Washburn	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)
6	Florida Power & Light Co.	Silvia P Mitchell	Affirmative	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Los Angeles Department of Water & Power	Brad Packer		
6	Lower Colorado River Authority	Michael Shaw	Affirmative	
6	Luminant Energy	Brenda Hampton	Affirmative	
6	Manitoba Hydro	Blair Mukanik	Negative	COMMENT RECEIVED
6	Modesto Irrigation District	James McFall	Affirmative	
6	Muscatine Power & Water	John Stolley		
6	New York Power Authority	Saul Rojas	Affirmative	
6	Northern California Power Agency	Steve C Hill		
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson	Affirmative	
6	Oglethorpe Power Corporation	Donna Johnson	Affirmative	
6	Oklahoma Gas and Electric Co.	Jerry Nottnagel	Affirmative	
6	Omaha Public Power District	Douglas Collins	Affirmative	
6	PacifiCorp	Sandra L Shaffer	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	Portland General Electric Co.	Shawn P Davis	Affirmative	
6	Power Generation Services, Inc.	Stephen C Knapp		
6	Powerex Corp.	Gordon Dobson-Mack	Affirmative	
6	PPL EnergyPlus LLC	Elizabeth Davis	Affirmative	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Affirmative	
6	Salt River Project	William Abraham	Affirmative	
6	Santee Cooper	Michael Brown	Abstain	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	Kenn Backholm	Affirmative	

6	Southern California Edison Company	Joseph T Marone	Negative	SUPPORTS THIRD PARTY COMMENTS - (SCE's comments)
6	Southern Company Generation and Energy Marketing	John J. Ciza	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Affirmative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	
6	Westar Energy	Grant L Wilkerson	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	Peter Colussy	Affirmative	
7	Brickfield, Burchette, Ritts & Stone, P.C.	Thomas W Siegrist	Affirmative	
7	Occidental Chemical	Venona Greaff	Affirmative	
8		David L Kiguel	Affirmative	
8		Debra R Warner		
8		Roger C Zaklukiewicz		
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Volkmann Consulting, Inc.	Terry Volkmann	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
9	National Association of Regulatory Utility Commissioners	Jerry M Maio		
9	New York State Public Service Commission	Diane J Barney	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
10	Florida Reliability Coordinating Council	Linda C Campbell	Affirmative	
10	Midwest Reliability Organization	Russel Mountjoy	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Negative	COMMENT RECEIVED
10	ReliabilityFirst	Anthony E Jablonski	Abstain	
10	SERC Reliability Corporation	Joseph W Spencer	Affirmative	
10	Southwest Power Pool RE	Bob Reynolds	Abstain	
10	Texas Reliability Entity, Inc.	Derrick Davis	Affirmative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Abstain	

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Ballot Results	
Ballot Name:	Project 2010-02 Facility Interconnection Studies FAC-002-2
Ballot Period:	5/6/2014 - 5/16/2014
Ballot Type:	Initial
Total # Votes:	346
Total Ballot Pool:	401
Quorum:	**86.28 % The Quorum has been reached**
Weighted Segment Vote:	78.81 %
Ballot Results:	**The ballot has closed**

Summary of Ballot Results

Segment	Ballot Pool	Segment Weight	Affirmative # Votes	Affirmative Fraction	Negative # Votes	Negative Fraction	Negative Vote without a Comment	Abstain	No Vote
1 - Segment 1	108	1	66	0.805	16	0.195	0	11	15
2 - Segment 2	9	0.7	4	0.4	3	0.3	0	2	0
3 - Segment 3	87	1	60	0.87	9	0.13	0	8	10
4 - Segment 4	31	1	19	0.731	7	0.269	0	3	2
5 - Segment 5	91	1	51	0.836	10	0.164	0	9	21
6 - Segment 6	56	1	40	0.833	8	0.167	0	2	6
7 - Segment 7	2	0.2	2	0.2	0	0	0	0	0
8 - Segment 8	4	0.4	4	0.4	0	0	0	0	0
9 - Segment 9	4	0.3	1	0.1	2	0.2	0	0	1

10 - Segment 10	9	0.6	5	0.5	1	0.1	0	3	0
Totals	**401**	**7.2**	**252**	**5.675**	**56**	**1.525**	**0**	**38**	**55**

Individual Ballot Pool Results

Segment	Organization	Member	Ballot	NERC Notes
1	Ameren Services	Eric Scott	Negative	SUPPORTS THIRD PARTY COMMENTS - (Ameren)
1	American Electric Power	Paul B Johnson	Negative	SUPPORTS THIRD PARTY COMMENTS - (Tom Foltz - AEP)
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman		
1	Austin Energy	James Armke	Affirmative	
1	Avista Utilities	Heather Rosentrater	Affirmative	
1	Balancing Authority of Northern California	Kevin Smith	Affirmative	
1	Baltimore Gas & Electric Company	Christopher J Scanlon	Affirmative	
1	Basin Electric Power Cooperative	David Rudolph		
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	
1	Black Hills Corp	Wes Wingen	Abstain	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Affirmative	
1	Central Electric Power Cooperative	Michael B Bax	Affirmative	
1	Central Iowa Power Cooperative	Kevin J Lyons	Negative	SUPPORTS THIRD PARTY COMMENTS - (CIPCO supports the comments submitted by ACES.)
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Tallahassee	Daniel S Langston	Affirmative	
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Colorado Springs Utilities	Shawna Speer	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	CPS Energy	Glenn Pressler	Affirmative	
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Deseret Power	James Tucker	Abstain	
1	Dominion Virginia Power	Larry Nash	Negative	SUPPORTS THIRD PARTY COMMENTS - (Dominion)
1	Duke Energy Carolina	Doug E Hils	Affirmative	
1	Empire District Electric Co.	Ralph F Meyer	Affirmative	
1	Encari	Steven E Hamburg		
1	Entergy Transmission	Oliver A Burke	Affirmative	
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton		
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	FortisBC	Curtis Klashinsky		
1	Gainesville Regional Utilities	Richard Bachmeier	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
1	Georgia Transmission Corporation	Jason Snodgrass	Affirmative	

1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Muhammed Ali	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC RSC)
1	Hydro-Quebec TransEnergie	Martin Boisvert	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
1	Idaho Power Company	Molly Devine	Negative	COMMENT RECEIVED
1	International Transmission Company Holdings Corp	Michael Moltane	Abstain	
1	JDRJC Associates	Jim D Cyrulewski	Affirmative	
1	JEA	Ted E Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon		
1	Kansas City Power & Light Co.	Daniel Gibson	Affirmative	
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency (FMPA))
1	Lee County Electric Cooperative	John Chin	Abstain	
1	Lincoln Electric System	Doug Bantam		
1	Long Island Power Authority	Robert Ganley		
1	Los Angeles Department of Water & Power	John Burnett	Abstain	
1	Lower Colorado River Authority	Martyn Turner	Affirmative	
1	M & A Electric Power Cooperative	William Price	Affirmative	
1	Manitoba Hydro	Jo-Anne M Ross	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	Minnkota Power Coop. Inc.	Daniel L Inman	Affirmative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Affirmative	
1	National Grid USA	Michael Jones	Negative	SUPPORTS THIRD PARTY COMMENTS - (National Grid supports NPCC's comments.)
1	NB Power Corporation	Alan MacNaughton	Abstain	
1	New York Power Authority	Bruce Metruck	Affirmative	
1	Northeast Missouri Electric Power Cooperative	Kevin White		
1	Northeast Utilities	William Temple	Affirmative	
1	Northern Indiana Public Service Co.	Julaine Dyke	Affirmative	
1	NorthWestern Energy	John Canavan	Affirmative	
1	Ohio Valley Electric Corp.	Scott R Cunningham	Negative	SUPPORTS THIRD PARTY COMMENTS- Thomas Foltz of American Electric Power.
1	Oklahoma Gas and Electric Co.	Terri Pyle	Affirmative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Affirmative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson	Affirmative	
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan	Affirmative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	John T Walker	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams	Abstain	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Puget Sound Energy, Inc.	Denise M Lietz	Abstain	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	

1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	San Diego Gas & Electric	Will Speer		
1	SaskPower	Wayne Guttormson		
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Seminole Electric Cooperative, Inc.	Glenn Spurlock	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens		
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South Carolina Electric & Gas Co.	Tom Hanzlik	Abstain	
1	South Carolina Public Service Authority	Shawn T Abrams	Abstain	
1	Southern California Edison Company	Steven Mavis	Negative	SUPPORTS THIRD PARTY COMMENTS - (P. Farrell - Southern California Edison Co.)
1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Tampa Electric Co.	Beth Young	Affirmative	
1	Tennessee Valley Authority	Howell D Scott	Affirmative	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State Generation & Transmission Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo	Affirmative	
1	U.S. Bureau of Reclamation	Richard T Jackson	Affirmative	
1	United Illuminating Co.	Jonathan Appelbaum	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
1	Vermont Electric Power Company, Inc.	Kim Moulton	Affirmative	
1	Westar Energy	Allen Klassen	Affirmative	
1	Western Area Power Administration	Lloyd A Linke	Affirmative	
1	Wolverine Power Supply Coop., Inc.	Michelle Clements	Abstain	
1	Xcel Energy, Inc.	Gregory L Pieper	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Rich Vine	Negative	SUPPORTS THIRD PARTY COMMENTS - (ISO/RTO Standards Review Committee)
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Affirmative	
2	Independent Electricity System Operator	Leonard Kula	Negative	COMMENT RECEIVED
2	ISO New England, Inc.	Matthew F Goldberg	Abstain	
2	MISO	Marie Knox	Affirmative	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	stephanie monzon	Affirmative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Negative	COMMENT RECEIVED
3	AEP	Michael E Deloach	Negative	SUPPORTS THIRD PARTY COMMENTS - (Thomas Foltz - American Electric Power)
3	Alabama Power Company	Robert S Moore	Affirmative	
				COMMENT

3	Ameren Corp.	David J Jendras	Negative	RECEIVED
3	APS	Sarah Kist	Affirmative	
3	Associated Electric Cooperative, Inc.	Todd Bennett	Affirmative	
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	Avista Corp.	Scott J Kinney	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blue Ridge Electric	James L Layton	Abstain	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Power Cooperative	Adam M Weber	Affirmative	
3	Central Lincoln PUD	Steve Alexanderson	Affirmative	
3	City of Anaheim Public Utilities Department	Dennis M Schmidt		
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Clewiston	Lynne Mila	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)
3	City of Farmington	Linda R Jacobson	Abstain	
3	City of Green Cove Springs	Mark Schultz		
3	City of Redding	Bill Hughes	Affirmative	
3	City of Tallahassee	Bill R Fowler	Affirmative	
3	Colorado Springs Utilities	Jean Mueller	Affirmative	
3	ComEd	John Bee	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy Company	Gerald G Farringer	Affirmative	
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla	Affirmative	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Dominion Resources, Inc.	Connie B Lowe	Negative	SUPPORTS THIRD PARTY COMMENTS - (See Dominion's submitted comments)
3	DTE Electric	Kent Kujala	Abstain	
3	El Paso Electric Company	Rhonda Bryant		
3	FirstEnergy Corp.	Cindy E Stewart	Affirmative	
3	Florida Keys Electric Cooperative	Tom B Anthony	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Negative	COMMENT RECEIVED
3	Florida Power & Light Co.	Summer C. Esquerre	Affirmative	
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Affirmative	
3	Hydro One Networks, Inc.	Ayesha Sabouba	Negative	COMMENT RECEIVED
3	JEA	Garry Baker	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Affirmative	
3	Kansas City Power & Light Co.	Joshua D Bach	Affirmative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lee County Electric Cooperative	David A Hadzima		
3	Lincoln Electric System	Jason Fortik		
3	Los Angeles Department of Water & Power	Mike Anctil	Abstain	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	
3	M & A Electric Power Cooperative	Stephen D Pogue	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MEAG Power	Roger Brand	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Modesto Irrigation District	Jack W Savage		
3	Muscatine Power & Water	John S Bos	Affirmative	
3	National Grid USA	Brian E Shanahan	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC RSC)
3	Nebraska Public Power District	Tony Eddleman	Affirmative	
3	New York Power Authority	David R Rivera	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann		
3	Northern Indiana Public Service Co.	Ramon J Barany	Affirmative	

3	NW Electric Power Cooperative, Inc.	David McDowell	Affirmative	
3	Ocala Utility Services	Randy Hahn	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)
3	Oklahoma Gas and Electric Co.	Donald Hargrove	Affirmative	
3	Omaha Public Power District	Blaine R. Dinwiddie	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	Owensboro Municipal Utilities	Thomas T Lyons	Affirmative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	PNM Resources	Michael Mertz	Abstain	
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Potomac Electric Power Co.	Mark Yerger	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Puget Sound Energy, Inc.	Mariah R Kennedy	Abstain	
3	Rutherford EMC	Thomas Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Abstain	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas		
3	Snohomish County PUD No. 1	Mark Oens	Affirmative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Affirmative	
3	Southern California Edison Company	Lujuanna Medina	Negative	SUPPORTS THIRD PARTY COMMENTS - (SCE's comments)
3	Tacoma Power	Marc Donaldson	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Affirmative	
3	Tri-State Generation & Transmission Association, Inc.	Janelle Marriott	Affirmative	
3	Westar Energy	Bo Jones	Affirmative	
3	Wisconsin Electric Power Marketing	James R Keller	Affirmative	
3	Xcel Energy, Inc.	Michael Ibold	Affirmative	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Affirmative	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Abstain	
4	Constellation Energy Control & Dispatch, L.L.C.	Margaret Powell	Affirmative	
4	Consumers Energy Company	Tracy Goble	Affirmative	
4	Cowlitz County PUD	Rick Syring	Affirmative	
4	DTE Electric	Daniel Herring	Abstain	
4	Flathead Electric Cooperative	Russ Schneider	Affirmative	
4	Florida Municipal Power Agency	Frank Gaffney	Negative	COMMENT RECEIVED
4	Fort Pierce Utilities Authority	Cairo Vanegas	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Herb Schrayshuen	Herb Schrayshuen	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative	
4	Indiana Municipal Power Agency	Jack Alvey	Negative	SUPPORTS THIRD PARTY COMMENTS - (Support for comments submitted by Florida

				Municipal Power Agency (FMPA))
4	Integrys Energy Group, Inc.	Christopher Plante	Affirmative	
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	
4	Modesto Irrigation District	Spencer Tacke	Negative	COMMENT RECEIVED
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	South Mississippi Electric Power Association	Steve McElhaney	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Utility Services, Inc.	Brian Evans-Mongeon	Abstain	
4	Wisconsin Energy Corp.	Anthony Jankowski		
4	WPPI Energy	Todd Komplin		
5	Amerenue	Sam Dwyer	Negative	SUPPORTS THIRD PARTY COMMENTS - (Ameren comments)
5	American Electric Power	Thomas Foltz	Negative	COMMENT RECEIVED
5	Arizona Public Service Co.	Scott Takinen	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Affirmative	
5	Avista Corp.	Steve Wenke		
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
5	Black Hills Corp	George Tatar		
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Calpine Corporation	Hamid Zakery		
5	City and County of San Francisco	Daniel Mason	Affirmative	
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Redding	Paul A. Cummings	Affirmative	
5	City of Tallahassee	Karen Webb	Affirmative	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman		
5	Cogentrix Energy Power Management, LLC	Mike D Hirst		
5	Colorado Springs Utilities	Kaleb Brimhall	Affirmative	
5	Con Edison Company of New York	Brian O'Boyle	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Affirmative	
5	Cowlitz County PUD	Bob Essex	Affirmative	
5	Dairyland Power Coop.	Tommy Drea	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Negative	SUPPORTS THIRD PARTY COMMENTS - (Dominion)
5	DTE Electric	Mark Stefaniak		
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	EDP Renewables North America LLC	Heather Bowden	Abstain	
5	El Paso Electric Company	Gustavo Estrada		
5	Electric Power Supply Association	John R Cashin		
5	Entergy Services, Inc.	Tracey Stubbs	Affirmative	
5	Exelon Nuclear	Mark F Draper	Affirmative	

5	First Wind	John Robertson		
5	FirstEnergy Solutions	Kenneth Dresner		
5	Florida Municipal Power Agency	David Schumann	Negative	COMMENT RECEIVED
5	Great River Energy	Preston L Walsh	Affirmative	
5	Hydro-Québec Production	Roger Dufresne	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
5	Ingleside Cogeneration LP	Michelle R DAntuono	Affirmative	
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Affirmative	
5	Kissimmee Utility Authority	Mike Blough	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
5	Lakeland Electric	James M Howard	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
5	Liberty Electric Power LLC	Daniel Duff	Affirmative	
5	Lincoln Electric System	Dennis Florom	Negative	COMMENT RECEIVED
5	Los Angeles Department of Water & Power	Kenneth Silver	Abstain	
5	Lower Colorado River Authority	Dixie Wells	Affirmative	
5	Luminant Generation Company LLC	Rick Terrill	Affirmative	
5	Manitoba Hydro	Chris Mazur	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Affirmative	
5	New York Power Authority	Wayne Sipperly	Affirmative	
5	NextEra Energy	Allen D Schriver	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Northern Indiana Public Service Co.	Michael D Melvin		
5	Oglethorpe Power Corporation	Bernard Johnson	Affirmative	
5	Oklahoma Gas and Electric Co.	Henry L Staples	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard K Kinas		
5	Pacific Gas and Electric Company	Alex Chua	Affirmative	
5	Platte River Power Authority	Christopher R Wood	Affirmative	
5	Portland General Electric Co.	Matt E. Jastram		
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	PSEG Fossil LLC	Tim Kucey	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega		
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Abstain	
5	Puget Sound Energy, Inc.	Lynda Kupfer	Abstain	
5	Sacramento Municipal Utility District	Susan Gill-Zobitz	Affirmative	
5	Salt River Project	William Alkema	Affirmative	
5	Santee Cooper	Lewis P Pierce	Abstain	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins		
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic		
5	Southern California Edison Company	Denise Yaffe		
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tacoma Power	Chris Mattson	Affirmative	
5	Tampa Electric Co.	RJames Rocha		
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Affirmative	

5	Tri-State Generation & Transmission Association, Inc.	Mark Stein	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Abstain	
5	USDI Bureau of Reclamation	Erika Doot	Affirmative	
5	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman		
5	Westar Energy	Bryan Taggart	Affirmative	
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative	
5	Wisconsin Public Service Corp.	Scott E Johnson	Affirmative	
5	WPPI Energy	Steven Leovy		
5	Xcel Energy, Inc.	Mark A Castagneri		
6	AEP Marketing	Edward P. Cox	Negative	SUPPORTS THIRD PARTY COMMENTS - (Tom Foltz - AEP)
6	Ameren Missouri	Robert Quinlivan	Negative	COMMENT RECEIVED
6	APS	Randy A. Young	Affirmative	
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa Martin	Affirmative	
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirchak		
6	Colorado Springs Utilities	Shannon Fair	Affirmative	
6	Con Edison Company of New York	David Balban	Affirmative	
6	Constellation Energy Commodities Group	David J Carlson	Affirmative	
6	Dominion Resources, Inc.	Louis S. Slade	Negative	SUPPORTS THIRD PARTY COMMENTS - (Dominion)
6	Duke Energy	Greg Cecil	Affirmative	
6	FirstEnergy Solutions	Kevin Querry	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative	COMMENT RECEIVED
6	Florida Municipal Power Pool	Thomas Washburn	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)
6	Florida Power & Light Co.	Silvia P Mitchell	Affirmative	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)
6	Lincoln Electric System	Eric Ruskamp	Negative	COMMENT RECEIVED
6	Los Angeles Department of Water & Power	Brad Packer		
6	Lower Colorado River Authority	Michael Shaw	Affirmative	
6	Luminant Energy	Brenda Hampton	Affirmative	
6	Manitoba Hydro	Blair Mukanik	Affirmative	
6	Modesto Irrigation District	James McFall	Affirmative	
6	Muscatine Power & Water	John Stolley		
6	New York Power Authority	Saul Rojas	Affirmative	
6	Northern California Power Agency	Steve C Hill		
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson	Affirmative	
6	Oglethorpe Power Corporation	Donna Johnson	Affirmative	
6	Oklahoma Gas and Electric Co.	Jerry Nottnagel	Affirmative	
6	Omaha Public Power District	Douglas Collins	Affirmative	
6	PacifiCorp	Sandra L Shaffer	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	Portland General Electric Co.	Shawn P Davis	Affirmative	
6	Power Generation Services, Inc.	Stephen C Knapp		
6	Powerex Corp.	Gordon Dobson-Mack	Affirmative	
6	PPL EnergyPlus LLC	Elizabeth Davis	Affirmative	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Affirmative	
6	Salt River Project	William Abraham	Affirmative	

6	Santee Cooper	Michael Brown	Abstain	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	Kenn Backholm	Affirmative	
6	Southern California Edison Company	Joseph T Marone	Negative	SUPPORTS THIRD PARTY COMMENTS - (SCE's comments)
6	Southern Company Generation and Energy Marketing	John J. Ciza	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Affirmative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	
6	Westar Energy	Grant L Wilkerson	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	Peter Colussy	Affirmative	
7	Brickfield, Burchette, Ritts & Stone, P.C.	Thomas W Siegrist	Affirmative	
7	Occidental Chemical	Venona Greaff	Affirmative	
8		Roger C Zaklukiewicz	Affirmative	
8		David L Kiguel	Affirmative	
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Volkmann Consulting, Inc.	Terry Volkmann	Affirmative	
9	Central Lincoln PUD	Bruce Lovelin	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
9	National Association of Regulatory Utility Commissioners	Jerry M Maio		
9	New York State Public Service Commission	Diane J Barney	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
10	Florida Reliability Coordinating Council	Linda C Campbell	Affirmative	
10	Midwest Reliability Organization	Russel Mountjoy	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Negative	COMMENT RECEIVED
10	ReliabilityFirst	Anthony E Jablonski	Abstain	
10	SERC Reliability Corporation	Joseph W Spencer	Affirmative	
10	Southwest Power Pool RE	Bob Reynolds	Abstain	
10	Texas Reliability Entity, Inc.	Derrick Davis	Affirmative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Abstain	

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Non-Binding Poll Results

Project 2010-02 Connecting New Facilities to the Grid

Non-Binding Poll Results	
Non-Binding Poll Name:	Project 2010-02 FAC-001-2
Poll Period:	5/6/2014 - 5/16/2014
Total # Opinions:	304
Total Ballot Pool:	364
Summary Results:	83.52% of those who registered to participate provided an opinion or an abstention; 84.38% of those who provided an opinion indicated support for the VRFs and VSLs.

Individual Ballot Pool Results

Segment	Organization	Member	Opinions	NERC Notes
1	Ameren Services	Eric Scott	Negative	SUPPORTS THIRD PARTY COMMENTS - (Ameren)
1	American Electric Power	Paul B Johnson	Abstain	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman		
1	Austin Energy	James Armke	Affirmative	
1	Avista Utilities	Heather Rosentrater	Affirmative	
1	Balancing Authority of Northern California	Kevin Smith	Affirmative	
1	Basin Electric Power Cooperative	David Rudolph		
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Black Hills Corp	Wes Wingen		
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Abstain	
1	Central Electric Power Cooperative	Michael B Bax	Affirmative	
1	Central Iowa Power Cooperative	Kevin J Lyons	Negative	SUPPORTS THIRD PARTY COMMENTS - (CIPCO supports the comments

				submitted by ACES.)
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Tallahassee	Daniel S Langston	Affirmative	
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Colorado Springs Utilities	Shawna Speer	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	CPS Energy	Glenn Pressler	Affirmative	
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Deseret Power	James Tucker		
1	Dominion Virginia Power	Larry Nash	Abstain	
1	Duke Energy Carolina	Doug E Hils	Affirmative	
1	Encari	Steven E Hamburg		
1	Entergy Transmission	Oliver A Burke	Affirmative	
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton		
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	FortisBC	Curtis Klashinsky		
1	Gainesville Regional Utilities	Richard Bachmeier		
1	Georgia Transmission Corporation	Jason Snodgrass	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Muhammed Ali	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC RSC)
1	Hydro-Quebec TransEnergie	Martin Boisvert	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
1	Idaho Power Company	Molly Devine	Abstain	
1	International Transmission Company Holdings Corp	Michael Moltane	Abstain	
1	JDRJC Associates	Jim D Cyrulewski	Affirmative	
1	JEA	Ted E Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon		
1	Kansas City Power & Light Co.	Daniel Gibson	Affirmative	
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida

				Municipal Power Agency (FMPA))
1	Lee County Electric Cooperative	John Chin	Abstain	
1	Lincoln Electric System	Doug Bantam		
1	Long Island Power Authority	Robert Ganley		
1	Los Angeles Department of Water & Power	John Burnett	Abstain	
1	Lower Colorado River Authority	Martyn Turner	Affirmative	
1	M & A Electric Power Cooperative	William Price	Affirmative	
1	Manitoba Hydro	Jo-Anne M Ross	Negative	COMMENT RECEIVED
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	Minnkota Power Coop. Inc.	Daniel L Inman	Affirmative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Affirmative	
1	National Grid USA	Michael Jones	Negative	SUPPORTS THIRD PARTY COMMENTS - (National Grid supports NPCC's comments.)
1	NB Power Corporation	Alan MacNaughton	Abstain	
1	New York Power Authority	Bruce Metruck	Affirmative	
1	Northeast Missouri Electric Power Cooperative	Kevin White		
1	Northeast Utilities	William Temple	Affirmative	
1	Northern Indiana Public Service Co.	Julaine Dyke	Affirmative	
1	NorthWestern Energy	John Canavan	Affirmative	
1	Ohio Valley Electric Corp.	Scott R Cunningham	Abstain	
1	Oklahoma Gas and Electric Co.	Terri Pyle	Affirmative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Affirmative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson	Affirmative	
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan	Affirmative	
1	Platte River Power Authority	John C. Collins	Abstain	
1	Portland General Electric Co.	John T Walker	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams	Abstain	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Puget Sound Energy, Inc.	Denise M Lietz	Abstain	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	San Diego Gas & Electric	Will Speer		
1	SaskPower	Wayne Guttormson		

1	Seminole Electric Cooperative, Inc.	Glenn Spurlock	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens		
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South Carolina Electric & Gas Co.	Tom Hanzlik	Abstain	
1	South Carolina Public Service Authority	Shawn T Abrams	Abstain	
1	Southern California Edison Company	Steven Mavis		
1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Tampa Electric Co.	Beth Young	Affirmative	
1	Tennessee Valley Authority	Howell D Scott	Abstain	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State Generation & Transmission Association, Inc.	Tracy Sliman	Negative	COMMENT RECEIVED
1	Tucson Electric Power Co.	John Tolo	Affirmative	
1	U.S. Bureau of Reclamation	Richard T Jackson	Affirmative	
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Vermont Electric Power Company, Inc.	Kim Moulton	Affirmative	
1	Westar Energy	Allen Klassen	Affirmative	
1	Western Area Power Administration	Lloyd A Linke	Affirmative	
1	Wolverine Power Supply Coop., Inc.	Michelle Clements	Abstain	
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Rich Vine	Abstain	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Affirmative	
2	Independent Electricity System Operator	Leonard Kula	Affirmative	
2	ISO New England, Inc.	Matthew F Goldberg	Abstain	
2	MISO	Marie Knox	Affirmative	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	stephanie monzon	Affirmative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Abstain	
3	AEP	Michael E Deloach	Abstain	
3	Alabama Power Company	Robert S Moore	Affirmative	
3	Ameren Corp.	David J Jendras	Negative	COMMENT RECEIVED
3	APS	Sarah Kist	Affirmative	
3	Associated Electric Cooperative, Inc.	Todd Bennett	Affirmative	

3	Avista Corp.	Scott J Kinney	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Power Cooperative	Adam M Weber	Affirmative	
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Clewiston	Lynne Mila	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)
3	City of Farmington	Linda R Jacobson	Abstain	
3	City of Green Cove Springs	Mark Schultz		
3	City of Tallahassee	Bill R Fowler	Affirmative	
3	Colorado Springs Utilities	Jean Mueller	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy Company	Gerald G Farringer	Abstain	
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla	Affirmative	
3	Dominion Resources, Inc.	Connie B Lowe	Abstain	
3	DTE Electric	Kent Kujala	Abstain	
3	El Paso Electric Company	Rhonda Bryant		
3	FirstEnergy Corp.	Cindy E Stewart	Affirmative	
3	Florida Keys Electric Cooperative	Tom B Anthony	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Negative	COMMENT RECEIVED
3	Florida Power & Light Co.	Summer C. Esquerre	Affirmative	
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Affirmative	
3	JEA	Garry Baker	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Affirmative	
3	Kansas City Power & Light Co.	Joshua D Bach	Affirmative	
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lee County Electric Cooperative	David A Hadzima		
3	Lincoln Electric System	Jason Fortik		
3	Los Angeles Department of Water & Power	Mike Anctil	Abstain	
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	M & A Electric Power Cooperative	Stephen D Pogue	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Negative	COMMENT RECEIVED
3	MEAG Power	Roger Brand	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Modesto Irrigation District	Jack W Savage		
3	Muscatine Power & Water	John S Bos	Affirmative	
3	National Grid USA	Brian E Shanahan	Negative	SUPPORTS THIRD PARTY

				COMMENTS - (NPCC RSC)
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	David R Rivera	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann		
3	Northern Indiana Public Service Co.	Ramon J Barany	Affirmative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Affirmative	
3	Ocala Utility Services	Randy Hahn	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)
3	Oklahoma Gas and Electric Co.	Donald Hargrove	Affirmative	
3	Omaha Public Power District	Blaine R. Dinwiddie	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	Owensboro Municipal Utilities	Thomas T Lyons	Affirmative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	Platte River Power Authority	Terry L Baker	Abstain	
3	PNM Resources	Michael Mertz	Abstain	
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Puget Sound Energy, Inc.	Mariah R Kennedy	Abstain	
3	Rutherford EMC	Thomas Haire	Abstain	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Abstain	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas		
3	Snohomish County PUD No. 1	Mark Oens	Affirmative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Affirmative	
3	Southern California Edison Company	Lujuanna Medina	Negative	COMMENT RECEIVED
3	Tacoma Power	Marc Donaldson	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Tri-State Generation & Transmission Association, Inc.	Janelle Marriott	Negative	COMMENT RECEIVED
3	Westar Energy	Bo Jones	Affirmative	
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Abstain	
4	Consumers Energy Company	Tracy Goble	Abstain	
4	Cowlitz County PUD	Rick Syring	Affirmative	
4	DTE Electric	Daniel Herring	Abstain	
4	Flathead Electric Cooperative	Russ Schneider	Affirmative	

4	Florida Municipal Power Agency	Frank Gaffney	Negative	COMMENT RECEIVED
4	Fort Pierce Utilities Authority	Cairo Vanegas	Abstain	
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Herb Schrayshuen	Herb Schrayshuen	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Indiana Municipal Power Agency	Jack Alvey	Negative	SUPPORTS THIRD PARTY COMMENTS - (Support for comments submitted by Florida Municipal Power Agency (FMPA))
4	Integrys Energy Group, Inc.	Christopher Plante	Affirmative	
4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	
4	Modesto Irrigation District	Spencer Tacke		
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	South Mississippi Electric Power Association	Steve McElhaney	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Utility Services, Inc.	Brian Evans-Mongeon	Abstain	
4	Wisconsin Energy Corp.	Anthony Jankowski		
4	WPPI Energy	Todd Komplin		
5	Amerenue	Sam Dwyer	Negative	SUPPORTS THIRD PARTY COMMENTS - (Ameren comments)
5	American Electric Power	Thomas Foltz	Abstain	
5	Arizona Public Service Co.	Scott Takinen	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Affirmative	
5	Avista Corp.	Steve Wenke		
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Black Hills Corp	George Tatar		
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	

5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Calpine Corporation	Hamid Zakery		
5	City and County of San Francisco	Daniel Mason	Abstain	
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Tallahassee	Karen Webb	Affirmative	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman		
5	Cogentrix Energy Power Management, LLC	Mike D Hirst		
5	Colorado Springs Utilities	Kaleb Brimhall	Affirmative	
5	Con Edison Company of New York	Brian O'Boyle	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Abstain	
5	Cowlitz County PUD	Bob Essex	Affirmative	
5	Dairyland Power Coop.	Tommy Drea	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	
5	DTE Electric	Mark Stefaniak		
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	EDP Renewables North America LLC	Heather Bowden	Abstain	
5	El Paso Electric Company	Gustavo Estrada		
5	Electric Power Supply Association	John R Cashin		
5	Entergy Services, Inc.	Tracey Stubbs	Affirmative	
5	First Wind	John Robertson		
5	FirstEnergy Solutions	Kenneth Dresner		
5	Florida Municipal Power Agency	David Schumann	Negative	COMMENT RECEIVED
5	Great River Energy	Preston L Walsh	Affirmative	
5	Hydro-Québec Production	Roger Dufresne	Abstain	
5	Ingleside Cogeneration LP	Michelle R DAntuono	Affirmative	
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Affirmative	
5	Kissimmee Utility Authority	Mike Blough	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
5	Liberty Electric Power LLC	Daniel Duff	Affirmative	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver	Abstain	
5	Lower Colorado River Authority	Dixie Wells	Affirmative	

5	Luminant Generation Company LLC	Rick Terrill	Affirmative	
5	Manitoba Hydro	Chris Mazur	Negative	COMMENT RECEIVED
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Wayne Sipperly	Affirmative	
5	NextEra Energy	Allen D Schriver	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Northern Indiana Public Service Co.	Michael D Melvin		
5	Oglethorpe Power Corporation	Bernard Johnson	Affirmative	
5	Oklahoma Gas and Electric Co.	Henry L Staples	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard K Kinas		
5	Pacific Gas and Electric Company	Alex Chua	Affirmative	
5	Platte River Power Authority	Christopher R Wood	Abstain	
5	Portland General Electric Co.	Matt E. Jastram		
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	PSEG Fossil LLC	Tim Kucey	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega		
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Abstain	
5	Puget Sound Energy, Inc.	Lynda Kupfer	Abstain	
5	Sacramento Municipal Utility District	Susan Gill-Zobitz	Affirmative	
5	Salt River Project	William Alkema	Affirmative	
5	Santee Cooper	Lewis P Pierce	Abstain	
5	Seattle City Light	Michael J. Haynes	Abstain	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins		
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic		
5	Southern California Edison Company	Denise Yaffe		
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tacoma Power	Chris Mattson	Affirmative	
5	Tampa Electric Co.	RJames Rocha		
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Abstain	
5	Tri-State Generation & Transmission Association, Inc.	Mark Stein	Negative	COMMENT RECEIVED
5	U.S. Army Corps of Engineers	Melissa Kurtz	Abstain	
5	USDI Bureau of Reclamation	Erika Doot	Affirmative	
5	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman		

5	Wisconsin Public Service Corp.	Scott E Johnson	Affirmative	
5	WPPI Energy	Steven Leovy		
5	Xcel Energy, Inc.	Mark A Castagneri		
6	AEP Marketing	Edward P. Cox	Abstain	
6	Ameren Missouri	Robert Quinlivan	Negative	
6	APS	Randy A. Young	Affirmative	
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa Martin	Affirmative	
6	Cleco Power LLC	Robert Hirchak		
6	Colorado Springs Utilities	Shannon Fair	Affirmative	
6	Con Edison Company of New York	David Balban	Affirmative	
6	Duke Energy	Greg Cecil	Affirmative	
6	FirstEnergy Solutions	Kevin Querry	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative	COMMENT RECEIVED
6	Florida Municipal Power Pool	Thomas Washburn	Abstain	
6	Florida Power & Light Co.	Silvia P Mitchell	Affirmative	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Los Angeles Department of Water & Power	Brad Packer		
6	Lower Colorado River Authority	Michael Shaw	Affirmative	
6	Luminant Energy	Brenda Hampton	Affirmative	
6	Manitoba Hydro	Blair Mukanik	Negative	COMMENT RECEIVED
6	Modesto Irrigation District	James McFall	Abstain	
6	Muscatine Power & Water	John Stolley		
6	New York Power Authority	Saul Rojas	Affirmative	
6	Northern California Power Agency	Steve C Hill		
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Oglethorpe Power Corporation	Donna Johnson	Affirmative	
6	Oklahoma Gas and Electric Co.	Jerry Nottnagel	Affirmative	
6	Omaha Public Power District	Douglas Collins	Affirmative	
6	PacifiCorp	Sandra L Shaffer	Abstain	
6	Platte River Power Authority	Carol Ballantine	Abstain	
6	Portland General Electric Co.	Shawn P Davis	Affirmative	
6	Power Generation Services, Inc.	Stephen C Knapp		
6	Powerex Corp.	Gordon Dobson-Mack	Abstain	
6	PPL EnergyPlus LLC	Elizabeth Davis	Affirmative	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Affirmative	

6	Salt River Project	William Abraham	Affirmative	
6	Santee Cooper	Michael Brown	Abstain	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	Kenn Backholm	Affirmative	
6	Southern California Edison Company	Joseph T Marone	Negative	COMMENT RECEIVED
6	Southern Company Generation and Energy Marketing	John J. Ciza	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Affirmative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Abstain	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
7	Brickfield, Burchette, Ritts & Stone, P.C.	Thomas W Siegrist	Affirmative	
7	Occidental Chemical	Venona Greaff	Affirmative	
8		David L Kiguel	Affirmative	
8		Roger C Zaklukiewicz		
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Volkmann Consulting, Inc.	Terry Volkmann	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
9	National Association of Regulatory Utility Commissioners	Jerry M Maio		
10	Florida Reliability Coordinating Council	Linda C Campbell	Affirmative	
10	Midwest Reliability Organization	Russel Mountjoy	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Negative	COMMENT RECEIVED
10	ReliabilityFirst	Anthony E Jablonski	Affirmative	
10	SERC Reliability Corporation	Joseph W Spencer	Affirmative	
10	Southwest Power Pool RE	Bob Reynolds	Abstain	
10	Texas Reliability Entity, Inc.	Derrick Davis	Abstain	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Abstain	

Non-Binding Poll Results

Project 2010-02 Connecting New Facilities to the Grid

Non-Binding Poll Results	
Non-Binding Poll Name:	Project 2010-02 FAC-002-2
Poll Period:	5/6/2014 - 5/16/2014
Total # Opinions:	304
Total Ballot Pool:	365
Summary Results:	83.29% of those who registered to participate provided an opinion or an abstention; 86.03% of those who provided an opinion indicated support for the VRFs and VSLs.

Individual Ballot Pool Results

Segment	Organization	Member	Opinions	NERC Notes
1	Ameren Services	Eric Scott	Negative	SUPPORTS THIRD PARTY COMMENTS - (Ameren)
1	American Electric Power	Paul B Johnson	Abstain	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman		
1	Austin Energy	James Armke	Affirmative	
1	Avista Utilities	Heather Rosentrater	Affirmative	
1	Balancing Authority of Northern California	Kevin Smith	Affirmative	
1	Basin Electric Power Cooperative	David Rudolph		
1	BC Hydro and Power Authority	Patricia Robertson	Abstain	
1	Black Hills Corp	Wes Wingen		
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Abstain	
1	Central Electric Power Cooperative	Michael B Bax	Affirmative	
1	Central Iowa Power Cooperative	Kevin J Lyons	Negative	SUPPORTS THIRD PARTY COMMENTS - (CIPCO supports the comments submitted by ACES.)
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	

1	City of Tallahassee	Daniel S Langston	Affirmative	
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel		
1	Colorado Springs Utilities	Shawna Speer	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	CPS Energy	Glenn Pressler	Affirmative	
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Deseret Power	James Tucker		
1	Dominion Virginia Power	Larry Nash	Abstain	
1	Duke Energy Carolina	Doug E Hils	Affirmative	
1	Encari	Steven E Hamburg		
1	Entergy Transmission	Oliver A Burke	Affirmative	
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton		
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	FortisBC	Curtis Klashinsky		
1	Gainesville Regional Utilities	Richard Bachmeier		
1	Georgia Transmission Corporation	Jason Snodgrass	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Muhammed Ali	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC RSC)
1	Hydro-Quebec TransEnergie	Martin Boisvert	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC)
1	Idaho Power Company	Molly Devine	Negative	COMMENT RECEIVED
1	International Transmission Company Holdings Corp	Michael Moltane	Abstain	
1	JDRJC Associates	Jim D Cyrulewski	Affirmative	
1	JEA	Ted E Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon		
1	Kansas City Power & Light Co.	Daniel Gibson	Affirmative	
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency (FMPA))
1	Lee County Electric Cooperative	John Chin	Abstain	
1	Lincoln Electric System	Doug Bantam		
1	Long Island Power Authority	Robert Ganley		

1	Los Angeles Department of Water & Power	John Burnett	Abstain	
1	Lower Colorado River Authority	Martyn Turner	Affirmative	
1	M & A Electric Power Cooperative	William Price	Affirmative	
1	Manitoba Hydro	Jo-Anne M Ross	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	Minnkota Power Coop. Inc.	Daniel L Inman	Affirmative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Affirmative	
1	National Grid USA	Michael Jones	Negative	SUPPORTS THIRD PARTY COMMENTS - (National Grid supports NPCC's comments.)
1	NB Power Corporation	Alan MacNaughton	Abstain	
1	New York Power Authority	Bruce Metruck	Affirmative	
1	Northeast Missouri Electric Power Cooperative	Kevin White		
1	Northeast Utilities	William Temple	Affirmative	
1	Northern Indiana Public Service Co.	Julaine Dyke	Affirmative	
1	NorthWestern Energy	John Canavan	Affirmative	
1	Ohio Valley Electric Corp.	Scott R Cunningham	Abstain	
1	Oklahoma Gas and Electric Co.	Terri Pyle	Affirmative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Affirmative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson	Affirmative	
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan	Affirmative	
1	Platte River Power Authority	John C. Collins	Abstain	
1	Portland General Electric Co.	John T Walker	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams	Abstain	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Abstain	
1	Puget Sound Energy, Inc.	Denise M Lietz	Abstain	
1	Rochester Gas and Electric Corp.	John C. Allen	Affirmative	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	San Diego Gas & Electric	Will Speer		
1	SaskPower	Wayne Guttormson		
1	Seminole Electric Cooperative, Inc.	Glenn Spurlock	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens		
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South Carolina Electric & Gas Co.	Tom Hanzlik	Abstain	
1	South Carolina Public Service Authority	Shawn T Abrams	Abstain	
1	Southern California Edison Company	Steven Mavis		
1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison	Negative	SUPPORTS THIRD PARTY

				COMMENTS - (ACES)
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
1	Tampa Electric Co.	Beth Young	Affirmative	
1	Tennessee Valley Authority	Howell D Scott	Abstain	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State Generation & Transmission Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo	Affirmative	
1	U.S. Bureau of Reclamation	Richard T Jackson	Affirmative	
1	United Illuminating Co.	Jonathan Appelbaum	Affirmative	
1	Vermont Electric Power Company, Inc.	Kim Moulton	Affirmative	
1	Westar Energy	Allen Klassen	Affirmative	
1	Western Area Power Administration	Lloyd A Linke	Affirmative	
1	Wolverine Power Supply Coop., Inc.	Michelle Clements	Abstain	
2	BC Hydro	Venkataramakrishnan Vinnakota	Abstain	
2	California ISO	Rich Vine	Negative	SUPPORTS THIRD PARTY COMMENTS - (ISO/RTO Standards Review Committee)
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Affirmative	
2	Independent Electricity System Operator	Leonard Kula	Affirmative	
2	ISO New England, Inc.	Matthew F Goldberg	Abstain	
2	MISO	Marie Knox	Affirmative	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	stephanie monzon	Affirmative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Abstain	
3	AEP	Michael E Deloach	Abstain	
3	Alabama Power Company	Robert S Moore	Affirmative	
3	Ameren Corp.	David J Jendras	Negative	COMMENT RECEIVED
3	APS	Sarah Kist	Affirmative	
3	Associated Electric Cooperative, Inc.	Todd Bennett	Affirmative	
3	Avista Corp.	Scott J Kinney	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Abstain	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Power Cooperative	Adam M Weber	Affirmative	
3	City of Anaheim Public Utilities Department	Dennis M Schmidt		
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	

3	City of Clewiston	Lynne Mila	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)
3	City of Farmington	Linda R Jacobson	Abstain	
3	City of Green Cove Springs	Mark Schultz		
3	City of Tallahassee	Bill R Fowler	Affirmative	
3	Colorado Springs Utilities	Jean Mueller	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy Company	Gerald G Farringer	Affirmative	
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla	Affirmative	
3	Dominion Resources, Inc.	Connie B Lowe	Abstain	
3	DTE Electric	Kent Kujala	Abstain	
3	El Paso Electric Company	Rhonda Bryant		
3	FirstEnergy Corp.	Cindy E Stewart	Affirmative	
3	Florida Keys Electric Cooperative	Tom B Anthony	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Negative	COMMENT RECEIVED
3	Florida Power & Light Co.	Summer C. Esquerre	Affirmative	
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Affirmative	
3	Hydro One Networks, Inc.	Ayesha Sabouba		
3	JEA	Garry Baker	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Affirmative	
3	Kansas City Power & Light Co.	Joshua D Bach	Affirmative	
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lee County Electric Cooperative	David A Hadzima		
3	Lincoln Electric System	Jason Fortik		
3	Los Angeles Department of Water & Power	Mike Anctil	Abstain	
3	Louisville Gas and Electric Co.	Charles A. Freibert		
3	M & A Electric Power Cooperative	Stephen D Pogue	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MEAG Power	Roger Brand	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Modesto Irrigation District	Jack W Savage		
3	National Grid USA	Brian E Shanahan	Negative	SUPPORTS THIRD PARTY COMMENTS - (NPCC RSC)
3	Nebraska Public Power District	Tony Eddleman	Abstain	
3	New York Power Authority	David R Rivera	Affirmative	
3	Northern Indiana Public Service Co.	Ramon J Barany	Affirmative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Affirmative	
3	Ocala Utility Services	Randy Hahn	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)

3	Oklahoma Gas and Electric Co.	Donald Hargrove	Affirmative	
3	Omaha Public Power District	Blaine R. Dinwiddie	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Abstain	
3	Owensboro Municipal Utilities	Thomas T Lyons	Affirmative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	Platte River Power Authority	Terry L Baker	Abstain	
3	PNM Resources	Michael Mertz	Abstain	
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Abstain	
3	Puget Sound Energy, Inc.	Mariah R Kennedy	Abstain	
3	Rutherford EMC	Thomas Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Abstain	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas		
3	Snohomish County PUD No. 1	Mark Oens	Affirmative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Affirmative	
3	Southern California Edison Company	Lujuanna Medina	Negative	COMMENT RECEIVED
3	Tacoma Power	Marc Donaldson	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Abstain	
3	Tri-State Generation & Transmission Association, Inc.	Janelle Marriott	Affirmative	
3	Westar Energy	Bo Jones	Affirmative	
3	Xcel Energy, Inc.	Michael Ibold	Abstain	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Abstain	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Abstain	
4	Consumers Energy Company	Tracy Goble	Affirmative	
4	Cowlitz County PUD	Rick Syring	Affirmative	
4	DTE Electric	Daniel Herring	Abstain	
4	Flathead Electric Cooperative	Russ Schneider	Affirmative	
4	Florida Municipal Power Agency	Frank Gaffney	Negative	COMMENT RECEIVED
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Herb Schrayshuen	Herb Schrayshuen	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Abstain	
4	Indiana Municipal Power Agency	Jack Alvey	Negative	SUPPORTS THIRD PARTY COMMENTS - (Support comments submitted by Florida Municipal

				Power Agency (FMPA))
4	Integrys Energy Group, Inc.	Christopher Plante	Affirmative	
4	Madison Gas and Electric Co.	Joseph DePoorter	Abstain	
4	Modesto Irrigation District	Spencer Tacke		
4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	South Mississippi Electric Power Association	Steve McElhaney	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Utility Services, Inc.	Brian Evans-Mongeon	Abstain	
4	Wisconsin Energy Corp.	Anthony Jankowski		
4	WPPI Energy	Todd Komplin		
5	Amerenue	Sam Dwyer	Negative	SUPPORTS THIRD PARTY COMMENTS - (Ameren comments)
5	American Electric Power	Thomas Foltz	Abstain	
5	Arizona Public Service Co.	Scott Takinen	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Affirmative	
5	Avista Corp.	Steve Wenke		
5	BC Hydro and Power Authority	Clement Ma	Abstain	
5	Black Hills Corp	George Tatar		
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Calpine Corporation	Hamid Zakery		
5	City and County of San Francisco	Daniel Mason	Abstain	
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Tallahassee	Karen Webb	Affirmative	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman		
5	Cogentrix Energy Power Management, LLC	Mike D Hirst		
5	Colorado Springs Utilities	Kaleb Brimhall	Affirmative	
5	Con Edison Company of New York	Brian O'Boyle	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Affirmative	
5	Cowlitz County PUD	Bob Essex	Affirmative	
5	Dairyland Power Coop.	Tommy Drea	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Abstain	

5	DTE Electric	Mark Stefaniak		
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	EDP Renewables North America LLC	Heather Bowden	Abstain	
5	El Paso Electric Company	Gustavo Estrada		
5	Electric Power Supply Association	John R Cashin		
5	Entergy Services, Inc.	Tracey Stubbs	Affirmative	
5	First Wind	John Robertson		
5	FirstEnergy Solutions	Kenneth Dresner		
5	Florida Municipal Power Agency	David Schumann	Negative	COMMENT RECEIVED
5	Great River Energy	Preston L Walsh	Affirmative	
5	Hydro-Québec Production	Roger Dufresne	Negative	SUPPORTS THIRD PARTY COMMENTS - (Marc Dubord)
5	Ingleside Cogeneration LP	Michelle R DAntuono	Affirmative	
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Affirmative	
5	Kissimmee Utility Authority	Mike Blough	Negative	SUPPORTS THIRD PARTY COMMENTS - (Florida Municipal Power Agency)
5	Liberty Electric Power LLC	Daniel Duff	Affirmative	
5	Lincoln Electric System	Dennis Florom	Abstain	
5	Los Angeles Department of Water & Power	Kenneth Silver	Abstain	
5	Lower Colorado River Authority	Dixie Wells	Affirmative	
5	Luminant Generation Company LLC	Rick Terrill	Affirmative	
5	Manitoba Hydro	Chris Mazur	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Abstain	
5	New York Power Authority	Wayne Sipperly	Affirmative	
5	NextEra Energy	Allen D Schriver	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	SUPPORTS THIRD PARTY COMMENTS - (ACES)
5	Northern Indiana Public Service Co.	Michael D Melvin		
5	Oglethorpe Power Corporation	Bernard Johnson	Affirmative	
5	Oklahoma Gas and Electric Co.	Henry L Staples	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	

5	Orlando Utilities Commission	Richard K Kinas		
5	Pacific Gas and Electric Company	Alex Chua	Affirmative	
5	Platte River Power Authority	Christopher R Wood	Abstain	
5	Portland General Electric Co.	Matt E. Jastram		
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	PSEG Fossil LLC	Tim Kucey	Abstain	
5	Public Utility District No. 1 of Lewis County	Steven Grega		
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Abstain	
5	Puget Sound Energy, Inc.	Lynda Kupfer	Abstain	
5	Sacramento Municipal Utility District	Susan Gill-Zobitz	Affirmative	
5	Salt River Project	William Alkema	Affirmative	
5	Santee Cooper	Lewis P Pierce	Abstain	
5	Seattle City Light	Michael J. Haynes	Abstain	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins		
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic		
5	Southern California Edison Company	Denise Yaffe		
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tacoma Power	Chris Mattson	Affirmative	
5	Tampa Electric Co.	RJames Rocha		
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Abstain	
5	Tri-State Generation & Transmission Association, Inc.	Mark Stein	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Abstain	
5	USDI Bureau of Reclamation	Erika Doot	Affirmative	
5	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman		
5	Wisconsin Public Service Corp.	Scott E Johnson	Affirmative	
5	WPPI Energy	Steven Leovy		
5	Xcel Energy, Inc.	Mark A Castagneri		
6	AEP Marketing	Edward P. Cox	Abstain	
6	Ameren Missouri	Robert Quinlivan	Negative	
6	APS	Randy A. Young	Affirmative	
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa Martin	Affirmative	
6	Cleco Power LLC	Robert Hirchak		
6	Colorado Springs Utilities	Shannon Fair	Affirmative	
6	Con Edison Company of New York	David Balban	Affirmative	
6	Duke Energy	Greg Cecil	Affirmative	
6	FirstEnergy Solutions	Kevin Querry	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative	COMMENT RECEIVED
6	Florida Municipal Power Pool	Thomas Washburn	Abstain	
6	Florida Power & Light Co.	Silvia P Mitchell	Affirmative	
6	Great River Energy	Donna Stephenson		

6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Negative	SUPPORTS THIRD PARTY COMMENTS - (FMPA)
6	Lincoln Electric System	Eric Ruskamp	Abstain	
6	Los Angeles Department of Water & Power	Brad Packer		
6	Lower Colorado River Authority	Michael Shaw	Affirmative	
6	Luminant Energy	Brenda Hampton	Affirmative	
6	Manitoba Hydro	Blair Mukanik	Affirmative	
6	Modesto Irrigation District	James McFall	Abstain	
6	Muscatine Power & Water	John Stolley		
6	New York Power Authority	Saul Rojas	Affirmative	
6	Northern California Power Agency	Steve C Hill		
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	Oglethorpe Power Corporation	Donna Johnson	Affirmative	
6	Oklahoma Gas and Electric Co.	Jerry Nottnagel	Affirmative	
6	Omaha Public Power District	Douglas Collins	Affirmative	
6	PacifiCorp	Sandra L Shaffer	Abstain	
6	Platte River Power Authority	Carol Ballantine	Abstain	
6	Portland General Electric Co.	Shawn P Davis	Affirmative	
6	Power Generation Services, Inc.	Stephen C Knapp		
6	Powerex Corp.	Gordon Dobson-Mack	Abstain	
6	PPL EnergyPlus LLC	Elizabeth Davis	Affirmative	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Affirmative	
6	Salt River Project	William Abraham	Affirmative	
6	Santee Cooper	Michael Brown	Abstain	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	Kenn Backholm	Affirmative	
6	Southern California Edison Company	Joseph T Marone	Negative	COMMENT RECEIVED
6	Southern Company Generation and Energy Marketing	John J. Ciza	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Affirmative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Abstain	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
7	Brickfield, Burchette, Ritts & Stone, P.C.	Thomas W Siegrist	Affirmative	
7	Occidental Chemical	Venona Greaff	Affirmative	
8		David L Kiguel	Affirmative	
8		Roger C Zaklukiewicz	Affirmative	
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Volkmann Consulting, Inc.	Terry Volkmann	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Negative	SUPPORTS THIRD PARTY

				COMMENTS - (NPCC)
9	National Association of Regulatory Utility Commissioners	Jerry M Maio		
10	Florida Reliability Coordinating Council	Linda C Campbell	Affirmative	
10	Midwest Reliability Organization	Russel Mountjoy	Affirmative	
10	New York State Reliability Council	Alan Adamson	Affirmative	
10	Northeast Power Coordinating Council	Guy V. Zito	Negative	COMMENT RECEIVED
10	ReliabilityFirst	Anthony E Jablonski	Negative	COMMENT RECEIVED
10	SERC Reliability Corporation	Joseph W Spencer	Affirmative	
10	Southwest Power Pool RE	Bob Reynolds	Abstain	
10	Texas Reliability Entity, Inc.	Derrick Davis	Abstain	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Abstain	

Individual or group. (50 Responses)
Name (33 Responses)
Organization (33 Responses)
Group Name (17 Responses)
Lead Contact (17 Responses)
Contact Organization (17 Responses)
IF YOU WISH TO EXPRESS SUPPORT FOR ANOTHER ENTITY'S COMMENTS WITHOUT ENTERING ANY ADDITIONAL COMMENTS, YOU MAY DO SO HERE. (5 Responses)
Comments (50 Responses)
Question 1 (41 Responses)
Question 1 Comments (45 Responses)
Question 2 (43 Responses)
Question 2 Comments (45 Responses)
Question 3 (41 Responses)
Question 3 Comments (45 Responses)

Group
Dominion
Louis Slade
NERC Compliance Policy
No
While Dominion agrees with the revisions from a technical perspective, Dominion has the following suggestions which Dominion believe will improve clarity and increase consistency. • Given the SDT changed the title to use the word “Interconnection” instead of “Connection”, Dominion suggest the Purpose be modified similarly. Adoption of this suggestion will also improve consistency with Requirement 1. • In Applicability Section 4.1.2.1; suggest removing the ‘to’ in ‘conduct a study to’ • Requirement R2 – Suggest deleting “full” in the first sentence to be consistent with Applicability Section 4.1.2.1. • Requirement R3.1 and R3.2 – Dominion does not agree with inclusion of the phrase “materially modified” in this standard. In our view a modification (whether material or not) can only occur on an existing facility. According to the SAR, this standard is meant to apply to a new (maybe proposed would be a better word) that might become interconnected (if ultimately constructed). Dominion suggests removing the last sentence from the Application Guidelines section of the document. It is Dominion’s position that the Transmission Owner and applicable Generator Owner only needs to considered the items above this sentence in the development of Facility interconnection requirements. It is the obligation of the owner and operator of the interconnecting Facility to comply with all applicable NERC Reliability Standards.
No

While Dominion agrees with the revisions from a technical perspective, Dominion has the following suggestions which Dominion believe will improve clarity and increase consistency. • Do not see the need to include both Generator Owner (4.1.5) and Applicable Generator Owner (4.1.6). If both are necessary, then the requirements need to be revised to indicate which apply to GO in 4.1.5 and which apply to GO in 4.1.6. • Requirements 2-4 basically state the same things. The entity has to "….coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator….". This would be acceptable if, for example, R2 applied only to GO, R3 applied only to TO and R4 applied only to DP. But, to apply R2 only to GO and then to also include GO in R4 is confusing and appears to create double jeopardy. Similar can be said of R3 which includes TO as does R4. It appears that the SDT is attempting to distinguish between coordinating and cooperating relative to the interconnection of the facility owned by the entity (R2 and R3) and coordinating and cooperating on the actual study or studies performed (R4). However, given the almost identical wording in all of the cited requirements, if this is the intent, Dominion suggests revising the requirements to more clearly distinguish the differences. • As mentioned in Requirements R2-R4, R1.1 - R1.3, these are not requirements (they are subparts) and should be rewritten in R2 to read as R1 subparts 1.1 - 1.3. R3 and R4 should also be rewritten to incorporate this change. • Dominion does not agree with inclusion of the phrase "materially modified" in this standard. In our view a modification (whether material or not) can only occur on an existing facility. According to the SAR this standard is meant to apply to a new (maybe proposed would be a better word) that might become interconnected (if ultimately constructed).
Yes
Group
Northeast Power Coordinating Council
Guy Zito
Northeast Power Coordinating Council
No
The title of FAC-001-2 should remain Facility Connection Requirements. Using Interconnection can be confusing because Interconnection is a defined term in the NERC Glossary, and not intended for use in the standard. • Requirement R2 – Suggest deleting "full" in the first sentence to be consistent with Applicability 4.1.2.1. • Parts 3.1 and 3.2 – The inclusion of the phrase "materially modified" should not be used in this standard. A modification (whether material or not) can only occur on an existing facility. According to the SAR, this standard is meant to apply to a new facility that might become interconnected (if ultimately constructed). Suggest keeping the wording "…interconnected transmission system(s)" instead of replacing with "…affected system(s)". • The last sentence from the Application Guidelines section of the document should be removed. The Transmission Owner and applicable Generator Owner only need to consider the items preceding the last sentence in the development of Facility interconnection requirements. It is the obligation of the owner and operator of the interconnecting Facility to comply with all applicable NERC Reliability

Standards. Revise Applicability 4.1.2.1 (remove “to on”) to read : 4.1.2.1 Generator Owner with an executed Agreement to conduct a study to determine the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the interconnected Transmission System. Because “Facilities” cannot seek interconnect, suggest revising the Purpose to read: “…available so that entities seeking interconnection of their Facilities will have the…” Revise the second sentence of Requirement R1 to read: “Each Transmission Owner’s Facility interconnection requirements shall address:” “Interconnection requirements” are stipulated in the first sentence of R1. Remove the word “Facilities” from Parts 1.1, 1.2, and 1.3. R1 stipulates Facilities and the word does not need to be repeated. Suggest revising R2 to read “Each applicable Generator Owner shall, within 45 days of execution of an Agreement to determine the reliability impact of…” “Full” is not needed, and using “determine” is clearer than “conduct a study on”. Suggest revising Part 3.1 to read: “Procedures for conducting coordinated studies of new Facilities and their impacts on the interconnected systems.” “Materially modified” should not be used. Suggest revising Part 3.2 to read: “Procedures for the notification to those entities responsible for the reliability of the interconnected system of the reliability impact of new Facilities on those interconnected systems.”
No
Requirement R1 should be revised to include the words “and coordinate” as shown following: R1. Each Transmission Planner and each Planning Coordinator shall conduct and coordinate studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities. The actual study results must be agreed to. In Applicability 4.1.2 of the CLEAN version of FAC-002-2 Transmission Planner Transmission Owner is shown as 4.1.2. Transmission Planner and Transmission Owner are shown on the same line. They must be separated. In addition, the redlined version of FAC-002-2 shows numbering not deleted that is not shown of the CLEAN version. FAC-002-2 Clean and redlined versions should have been compared prior to posting because the aforementioned discrepancies lead one to believe that the posted CLEAN and redlined documents did not use the same “base” document. FAC-002-2 CLEAN and redlined versions should be compared to check for additional discrepancies. In Part 1.1 the wording “the interconnected systems” should not be replaced by “affected systems”. In Part 1.1 the Transmission Planner is required to evaluate the reliability impact of the Facility. In Part 1.3 the TP is conducting steady state, dynamic, and short circuit studies as needed. These are the same activities. What other actions were envisioned by the SDT that the TP would do to evaluate reliability? Part 1.2 should be removed. The existing words present a compliance difficulty and do not capture the purpose of the Standard. Applicable NERC Reliability Standards will require the TP to explain the selection of applicable NERC requirements and what applicability is being measured against. For example, for a new 345 kV line is the TP evaluating compliance to FAC-003? The TP would not evaluate compliance to the TO Facility Interconnection requirement since many of the requirements are outside the TP function, such as the inspection requirement. The TP is evaluating compliance of a Facility to the performance criteria in TPL-001-4. In addition, NERC reliability standard requirements cannot make regional and Transmission Owner planning criteria mandatory. In Part 1.4 the first

sentence stipulates collecting documentation that evidences the prior Parts. Part 1.4 should be deleted. This is a documentation requirement that could be placed in the measures. It is not important to require the documentation of the alternatives considered, since the purpose of the Standard is to evaluate the impact of the selected solution; all solutions should have no adverse impact. In Requirements R2, R3 the wording “coordinate and” should be removed. How does an entity comply with “coordinate”? R1.1, et al., should be identified as “Parts” in the standard. The SDT should determine whether or not the requirements conflict or are redundant from regulatory requirements that exist under FERC’s Pro Forma Generator Interconnection Procedures. For example, under the proposed R2, “Each Generator Owner seeking to interconnect generation Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3.”. FERC’s Pro Forma Generator Interconnection Procedures already specify all requirements that a Generator Owner must meet to get a new or materially modified unit interconnected to the transmission system. It is also unclear from a chronological perspective if these requirements need to be met and be demonstrable for every proposed facility that gets included in a planning study, or is only applicable for those that have reached a definite stage of construction. By the time entities commit to construction of facilities, the aforementioned steps of coordination and studies will have already been met making these requirements moot. Suggest the following to improve clarity and consistency in the document: • In the Applicability Section, do not see the need to include both a Generator Owner (Part 4.1.4) and Applicable Generator Owner (Part 4.1.5). “Applicable” can be added as a descriptor for Generator Owner, and its definition explained in the appropriate Rationale Box. If kept, Applicable Generator Owner used in the standard should be capitalized. “Applicable” should be removed from the wording of R4. • Requirements R2-R4 basically state the same things. The entity has to “….coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator….”. This would be acceptable if, for example, R2 applied only to GO, R3 applied only to TO and R4 applied only to DP. But, to apply R2 only to GO and then to also include GO in R4 is confusing and appears to create double jeopardy. It can be similarly said of R3 which includes TO, as does R4. It appears that the SDT is attempting to distinguish between coordinating and cooperating relative to the interconnection of the facility owned by the entity (R2 and R3) and coordinating and cooperating on the actual study or studies performed (R4). However, if this is the intent, given the almost identical wording in all of the cited requirements, suggest revising the requirements to more clearly distinguish the differences. The Rationale Boxes for Requirements R2 through R4 attempt to clarify the requirements, but the wording of the requirements need further clarification. • Parts 1.1-1.3 are cited in Requirements R2-R4. These are not requirements (they are Parts) and should be rewritten in R2 to read as Parts 1.1 - 1.3. R3 and R4 should also be rewritten to incorporate this change. • The inclusion of the phrase “materially modified” should not be used in this standard (including the Guidelines and Technical Basis). A modification (whether material or not) can only occur on an existing facility. The SAR clearly indicates its application to new facilities that might become interconnected (if ultimately constructed). In the Guidelines and Technical Basis Section the SDT did not provide any justification or resolution for a

determination of materiality. Alternatively, should the SDT choose not to remove the phrase “materially modified”, then the phrase needs to be explained in the Rationale Box. We propose that “material” means a modification which would have a reliability risk to the BES if not studied. Revise Applicability 4.1.6.1 (remove “to on”) to read: 4.1.6.1 Generator Owner with an executed Agreement to conduct a study to determine the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the interconnected Transmission System. Requirements R3 and R4 should be revised to capture the allowance in Part 1.4 for studies to be conducted by a single entity. As written R3 says TO shall coordinate and cooperate. We believe the correct idea to be that the TO will coordinate when the TP doesn’t provide the entire study result. The data provision in R3 and R4 should be its own requirement, i.e. the TO shall provide data, upon request, to the TP to support R1.
Yes
Individual
Greg Froehling
Rayburn Country Electric Cooperative
No
Actually Yes and No, I think the changes are moving in a positive direction however I am a proponent of combining the standards into one Facility Interconnection standard. Since they do interact I think it would be a move for efficiency. Also review the, Purpose: To ensure that Transmission Owners and applicable Generator Owners document and make Facility connection requirements available so that Facilities seeking interconnection will have the information necessary for considering and pursuing that interconnection Change the term Facilities to facilities to capture potential non BES interconnections. For SDT consideration: How are privately or cooperative owned (non-OATT) transmission lines addressed when the only interconnections that will allowed are those of the current owner? Is this a special case that can be addressed in the Guidelines and Technical Basis?” for future compliance reference.
No
Proposed requirement: Purpose: To evaluate the impact of interconnecting new or materially modified Facilities on the Bulk Electric System by conducting and coordinating studies. R3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3. Consider the use of the defined term Facility. For example, connecting a non- BES facility (i.e. a 138/25 kV transformer) to a BES transmission line. Per the requirement, I would not have to perform any studies since by definition I am not connecting a “Facility”. I am connecting a facility however. FACILITY A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.) Suggested purpose and requirement:

Purpose: To evaluate the impact of interconnecting new or materially modified facilities on the Bulk Electric System by conducting and coordinating studies. R3 Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to add new or materially modified interconnections to BES transmission Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3
Yes
Group
NCPA Generation
Steve Hill
NCPA
No
The Purpose is narrowed and more focused. Although emphasis is placed on conducting the necessary studies to assess the impacts as the requirement, additional requirements may include paying for the studies, advance funding, ensuring availability of additional funding and resources, need for an advance notice to minimize business interruption, etc. With this purpose in mind, the purpose in version2 is not clear. Perhaps more clarified statement of the Purpose may be: To ensure continuing reliability of the interconnection, transmission systems owned by Transmission Owners and/or Generator Owners, Generator Operators shall document and make available the detailed requirements to a third party seeking permission to connect, increase or otherwise alter the impact to their systems. The definition of Applicable Generator Owner - AGO (4.2) is narrowed compared to the version 1. Under version 1, the GO became the AGO when the GO had an executed agreement from an entity seeking permission to connect to the GO's existing facility. Version2 definition is narrowed down to having an executed agreement to conduct reliability impact study only. It is not explicity stated that the Applicable GO will initate the study with the PC or TP to perform the study. Is the Applicable GO also responsibile for entering into and agreement with the TP or PC to actually perform the study in addtion to documenting the Facility interconnection requirements and to make them available? This is not addressed in the standard and causes confusion. It is not clear why the SDT singled out the study and left out other elements that may be identified in the GO's Interconnection Agreement that the entity may be required to execute. Within these requirements, study should be a major element but not the only as described above in the Comments section of Purpose above. In Section 5 Background the objective of FAC-001 is narrated. SDT's selection of the phrase 'Facilities seeking interconnection' by the SDT, instead of "entities" is explained. With that in mind and maintaining the title "Facilities seeking interconnection", 4.1.2.1 may be better clarified as follows: Sub-Section 4.1.2.1: Applicable Generator Owner is the Generator Owner who has received an executed an agreement to study reliability impact on its transmission system from third party Facilities seeking interconnection to the Generator Owner's transmission system.

No
Proposed Purpose Modification: To evaluate the the reliability impact of interconnecting new or materially modified Facilities on the Bulk Electirc System based on the results of the Faciity Interconnection Studies Proposed Modification to R2: Each Applicable Generator Owner having executed an agreement from Faciliites seeking interconnection (as defined in FAC-001-2) shall coordinate and cooperate with the studies identified under R1 with its transmission Panner or the Planning Coordinator including but not limited to the scpe outlined under R1 above. It would be helpful to describe the responsibility of who initiates and consummates the agreement for the interconnection study with the PC or TP. This would help clarify the comments made for FAC-001 as well.
Yes
Individual
Dan Roethemeyer
Dynegy
Yes
No
While we agree with the overall goal of FAC-002-2, Dynegy is requesting that the SDT define within the Standard what is considered "material modified generation". In order to provide consistency across the BES it is essential to define this term.
Yes
Group
PacifiCorp
Sandra Shaffer
PacifiCorp
Yes
Possible typos: FAC-001-2 Redline draft –- “connection requirements” should be “interconnection requirements” in the Purpose section. FAC-001-2 Redline draft in section 4.1.2.1 -- Remove the “to” in the first sentence: “…conduct a study to on the reliability….”
Yes
Yes
Group
MRO NERC Standards Review Forum

Joe DePoorter
Madison Gas & Electric
No
Section 4.1.2.1: The word “to” in “Generator Owner with an executed Agreement to conduct a study to on the … ” should be removed. Section 4.1.2.1: By removing the word “evaluate” and replace it with “… to conduct a study on the reliability impact…” removes the TO’s ability to evaluate and reason if study analysis is needed. This wording changes the meaning to every application would need to be studied. R1.1.3: End-user facilities are included in Requirement 1 to have Facility interconnection requirements available – but there is not a requirement dealing with End Use Facilities like there is with Generation Facilities (R1.1.1) and Transmission Facilities (R1.1.2). R2: Again “evaluate” was removed and replaced with “…conduct a study…”. This forces the TO to complete a study for each new or modified interconnection – removes the ability for the TO use reason and judgment as to the impact.
No
R1 & R4. As written “Each TP AND each PC shall…” both conduct studies, yet in R2 & R3 applicable entities shall “cooperate with it TP OR PC…”. Recommend that in R1 & R4 the “and” be replaced with “or”. This will allow a single study to be accomplished where there are multiple TPs or PCs that have the responsibility for reviewing TOs or GOs interconnection requests. R1: Clarify that Transmission Planners and Planning Coordinators only conduct studies (assessments) of interconnections that may affect their respective area with addition of wording like, “. . . or electric end-user Facilities that may affect their respective area.” R1.2: Clarify and improve R1.2 to require the consideration of any applicable planning criteria or interconnection requirements (e.g. regional, TO, GO, DP) and allow the affected entities to decide which of conflicting planning criteria or interconnection requirements to be applicable for the facility interconnection assessment. Possible wording could be, “. . . applicable NERC Reliability Standard, applicable planning criteria, and applicable Facility interconnection requirements”. R1.4: Clarify that “alternatives considered” refers to the required consideration of alternatives for any necessary system modifications that would be necessary to avoid any adverse BES reliability that would be introduced by placing the facility interconnection in service, not a requirement to consideration alternative interconnect options to the proposed facility interconnection. [If a better facility interconnection is discovered and selected, then the FAC-002-2 requirements would simply apply to the alternate facility interconnection.] Potential clarification wording could be “alternatives considered for any system modifications needed to accommodate the facility interconnection”. A.5, R1, R1.1: Clarify the meaning of the expression, “materially modified”. The expression can be interpreted to include the partial or complete retirement of any generation, transmission, or distribution interconnection facilities. We accept this interpretation that the retirement of interconnection facilities may impact BES reliability in the planning horizon as much as interconnection facility additions or changes. If the inclusion of the retirement aspect is to be intended, then clarification wording could be added to the A.5 Background section like, “Materially modified Facilities includes either additions to or

removals from exiting interconnection facilities". Otherwise, the clarification wording could be added to the A.5 Background section would be, "Materially modified Facilities only includes additions to, not removals from, exiting interconnection facilities." Title, A.3, A.5, R1, R1.4, R2, R3, R4: Reconsider the use of the term "assessment" in the standard, rather than only in R1.4. The NERC Glossary of Terms defines the term, Planning Assessment, as "Documented evaluation of future Transmission system performance and Corrective Action Plans to remedy identified deficiencies." And the TPL standards describe system planning performance requirements in the framework of assessments that are supported by studies and analyses. In our industry the term, "studies" implies the performance of simulations, but not all interconnection evaluations, particularly electricity end-user interconnections, need study or analysis. Simple information can be sufficient to make certain assessments. Since the purpose of FAC-002-2 appears to be the performance of Planning Assessments on proposed Facility Interconnections, perhaps the wording of the title should be changed to something like, "Facility Interconnection Planning Assessments" or "Facility Interconnection Planning Performance Requirements" and the term "assessments" should be used instead of "studies" in the standard, except for R1.3.
Yes
Individual
Kayleigh Wilkerson
Lincoln Electric System
Yes
In Applicability Section 4.1.2.1, please delete the unnecessary "to". The statement should read "4.1.2.1 Generator Owner with an executed Agreement to conduct a study on the reliability impact of…" Within section A.5 "Background", recommend removing the reference to the specific reliability principle and instead reword the last sentence in A.5 as follows: "This objective supports the reliability principle that information necessary for planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably." If the above change cannot be made, LES suggests that at a minimum the drafting team include a footnote to reference the document of origin for "reliability principle 3". Although language from the principle is provided, incorporating a specific document reference would be beneficial for future reference.
No
Although appreciative of the drafting team's efforts in revising FAC-002, LES believes the proposed standard lacks sufficient clarity regarding the responsibilities of applicable entities and introduces unnecessary confusion with the addition of "Applicable Generator Owner" (4.1.5.1) as a functional entity. In particular, LES is confused why the drafting team chose to create separate requirements within the standard based on whether an entity seeks to interconnect a Facility versus if an entity receives a request to interconnect to a Facility. Regardless of where or how the possible interconnection originates, LES believes the onus is

on the registered entity with the impacted Facility (GO, TO, LSE, or DP) to coordinate and cooperate on studies for its Facilities with its Transmission Planner and Planning Coordinator. In consideration of the above comments, LES recommends the drafting team consolidate Requirements R2, R3 and R4 and instead state the following as a single requirement: “Each Generator Owner, Transmission Owner, Load-Serving Entity and Distribution Provider shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its transmission, generation, or electricity end-user Facilities, including but not limited to the provision of data as described in R1.1-R1.3.” Additionally, issues identified in the comments for FAC-001-2 apply to FAC-002-2 as well.
Group
FirstEnergy
Cindy Stewart
FirstEnergy Corporation
Yes
Yes
Yes
FirstEnergy does anticipate some procedural revisions for which one year is appreciated.
Individual
Jo-Anne Ross
Manitoba Hydro
No
On page 5, there is both a stated Purpose and Background. The first refers to documenting and making “Facility connection requirements available ….” The second refers to documenting “Facility interconnection requirements”. For consistency, both words should be the same. FAC-001-2 should address any specialized requirements resulting from the inclusion of dispersed power producing resources in the latest definition of BES (Inclusion I4). For example, areas such as aggregated modeling or specialized reactive power requirements or overfrequency ride through requirements, for example, should be considered for documentation if there are different requirements for traditional synchronous generators vs dispersed generation like wind and solar. The SDT has included the following requirement in the Guideline and Technical Basis, “The Transmission Owner’s or applicable Generator Owner’s Facility interconnection requirements should ensure that by the time of interconnection, the interconnecting Facility will be able to comply with all applicable NERC Reliability Standards.” If this is a true requirement it should be moved into the standard with an associated measure.

No
On page 5, studies must now include “Evaluation of compliance with applicable NERC Reliability Standards ….” Whether there is compliance is a legal determination, and for our particular entity, one that can only be made by the Public Utilities Board. A study could perhaps look at the interconnection’s “capability” of becoming compliant, but not compliance itself. The requirement is quite broad and subject to interpretation on the word “applicable”. The SDT should clarify applicable or limit scope to system performance, for example. Applicable Generator Owner is only used in R4 in FAC-002-2 regarding coordinating and cooperating. This is a good thing from our point of view but it doesn’t align with the changes made to FAC-001-2 and doesn’t imply that the applicable GO will be performing studies like the TP/PC are in R1.
Yes
Individual
David Jendras
Ameren
No
(1) In order to be consistent with the Draft FAC-002-2, FAC-002-1 should include the PC and TP as Functional Entities. (2) We request requirement R1.1 be reworded to read: “1.1 New and materially modified generation Facilities.” Realize that the GO is not allowed to have the “wide area view” of the interconnected transmission system the GO is therefore unable to determine whether any potential new generation, or modified existing generation Facilities, will have an impact on the BES. Therefore, we believe that the TO (who does have the wide area view of the interconnected transmission system), or the appropriate TP or PC, must provide the GO with technical guidance on what constitutes new generation or materially modified generation. In fact, this is the only way an existing GO can comply with R3.1 and R3.2 for a third party GO that requests an interconnection. (3) We request the first paragraph of the Guidelines and Technical Basis section be changed to recognize the need for the TO, TP or PC to specify technical guidance on what constitutes a “material modification” to an existing generation Facility. (4) Finally, we request the last paragraph of the Guidelines and Technical Basis section be reworded as follows: “The Transmission Owner’s or applicable Generator Owner’s Facility interconnection requirements should contain sufficient guidance, as necessary, so the interconnecting generation Facility will be able to comply with all applicable NERC Reliability Standards.” The current draft wording seems to imply a liability that the applicable GO must ensure that the new third party interconnection facilities will comply with all applicable NERC Standards.
No
(1) We believe this draft FAC-002-2 should require the TO, TP or TC, as appropriate, provide an applicable GO or GO owning an existing generating Facility, a detailed technical definition, with practical examples, of what constitutes new or materially modified generator Facilities.

Yes
Individual
Michelle D'Antuono
Ingleside Cogeneration LP
Yes
Ingleside Cogeneration LP (ICLP) believes that the revisions to FAC-001 reflect the evolution in standard's development that has taken place over the last year or so. Specifically, a significant amount of overlap with existing PUC regulations related to Facility connection requirements has been removed from R3 – consistent with Paragraph 81. We agree that the guidance section of the standard is the proper place for the detailed elements of a valid interconnection document. In addition, FAC-001 incorporates the risk-based concept by leaving it up to the entity to determine when a "material modification" is made. The previous version of the standard did not address modifications at all – a clear gap in the compliance framework. However, the project team chose not to describe the applicable modifications, which would be arbitrary in Ingleside's view. Instead, well-understood industry norms can be applied without requiring CEA judgment.
Yes
ICLP agrees that splitting Requirement R1 into multiple parts clearly distinguishes the responsibilities of planners and facility owners to interconnection studies. This eliminates any ambiguity in the process – and avoids the possibility of a violation to a missed or improperly executed task that is outside of an entity's control. In addition, ICLP believes that the modifications to FAC-002 are consistent with FAC-001 – which is particularly important in situations where a third party wants to tie into the GO-TO interconnection. Sometimes the Generator Owner can be compelled by the PUC or RTO to allow a third party attachment, which necessitates a follow up agreement to cover costs of studies and so forth. It is important that the third party negotiate the agreement in good faith and not use NERC standards as a means to force compliance. Our reading of both standards indicates that everyone's rights are preserved in the process – a necessary part of well-applied regulatory oversight.
Yes
Individual
Mark Wilson
Independent Electricity System Operator
Yes
No

We agree with most of the revisions. Below are some comments/proposed changes for consideration: a. Applicability Section 4.1: Suggest to add Load-Serving Entity in view of the responsibility assigned to these entities in Requirement R3. b. Applicability Section 4.1.2: Split Transmission Planner and Transmission Owner. c. Applicability Section 4.1.5: Applicable Generator Owners: The word “to” in the part “…a study to on the reliability impact…” should be removed. Also, suggest to combine 4.1.5 with 4.1.5.1 by revising 4.1.5 to: 4.1.5 Generator Owner with an executed Agreement to conduct a study to on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the interconnected Transmission systems. d. Requirement R1: We do not believe R1 is needed. The need for the PC and TP to conduct studies to assess reliability impacts of proposed additions/modification by TOs, DPs and GOs is not identified or stipulated in the existing FAC-002-1. While we agree that PC and TP have a role to review and coordinate studies by entities that propose to add new or modify existing Facilities, their role should be to review and concur/approve the proponent’s assessments only. Wrt considering impacts of the proposed additions/modifications, in the PC’s and TP’s periodic assessments to meet the TPL standard requirements, they are already required to consider and include approved and proposed Facility changes in their impacts assessed. Stipulating this requirement in the FAC-012 standard will result in duplicating with the TPL standard. The obligation to assess and demonstrate reliability impact/performance on the affected system(s) should be placed on the proponents themselves, i.e., the TO, GO, LSE, DP, not the PC or TP. We suggest to remove R1 from the standard.
Yes
Individual
David Thorne
Pepco Holdings Inc.
Yes
Yes
Yes
Individual
Amy Casuscelli
Xcel Energy
Yes
In general, we agree with the revisions and believe that work is moving the standard in the proper direction.

Yes
In general, we agree with the revisions to the standard and believe they are moving the standard in the proper direction. Under R1.2, it states “. . .regional and Transmission Owner planning requirements . . .” Typically the Transmission Planner, Planning Coordinator or region would have planning requirements, not the Transmission Owner. For clarity, we believe the works “and Transmission Owner” should be removed from this requirement.
Individual
William H. Chambliss
Virginia State Corporation Commission (member, Operating Committee)
Yes
Note that there is a typo in the "Applicability" part 4.1.2.1, which in part reads "....Agreement to conduct a study TO ON the reliability...." Also, R2 is very awkwardly worded. I believe the clarity could be improved a little by starting the sentence with the words "Within 45 days of...." and moving the current opening words ("Each applicable Generator Owner shall") to follow the new opening clause and be inserted just before the words "document Facility interconnection requirements and make them available on request." Thus, "Within 45 days of full execution of....interconnected Transmission systems, each applicable Generator Owner shall....."
Yes
Yes
Individual
Brett Holland
Kansas City Power & Light
Yes
Yes
No
Individual
Sergio Banuelos
Tri-State Generation and Transmission Association, Inc.
Yes

Tri-State agrees with the revisions, however, we believe the term "materially modified Facility" should be defined. As the standard is currently written, it is hard to interpret what the standard drafting team means by "materially modified Facilities." That is a very broad term being used. There should be more guidance on what qualifies makes a facility "materially modified."
Yes
There are some formatting issues in the Applicability and Background sections. "Load-Serving Entity" should be listed next after Generator Owner and Background should be section 5.
Yes
Group
Colorado Springs Utilities
Kaleb Brimhall
Colorado Springs Utilities
Agree
Southwest Power Pool
Individual
Teresa Czyz
Georgia Transmission Corporation
Yes
For R3, part 3.1, GTC would like to suggest re-wording to the following: “Procedures for coordinating studies with affected entities of the impact of new or materially modified Facilities.” For R3, part 3.2, GTC would like to suggest re-wording to the following: “Procedures for notifying those responsible for the reliability of affected system(s) of the impact of new or materially modified Facilities.”
Yes
For R1, GTC would like to suggest changing the word “integrating” to “interconnecting”. “Each Transmission Planner and each Planning Coordinator shall conduct studies on the reliability impact of interconnecting new or materially modified…..” For R1, part 1.2, GTC would like to suggest eliminating the words “Evaluation of”: “Compliance with……” For R1, part 1.4, GTC would like to suggest the following: “Documentation of study assumptions, system performance, alternatives considered, and jointly coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated with the affected entities.” For R4, GTC would like to suggest noting specifically that it is a “third party” interconnection and adding the DP and LSE as they could also have a third party request: Each Transmission Owner, each Distribution Provider, each Load Serving Entity, and each applicable Generator Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding third party requested

interconnections to its Facilities, including but not limited to the provision of data as described in R1.1-R1.3.
Yes
Individual
Thomas Foltz
American Electric Power
No
Regarding the references to facilities which are “materially modified”, and the documentation needed to support one’s technical rationale - would such references be pre-written and establish how, in general, they are to be applied in future decision making? Or instead, would this documentation be written on a case-by-case basis for providing justification on the decision that was made in each specific instance? Please provide clarification.
No
AEP objects to the text “coordinate and cooperate” as included in Requirements R2, R3, and R4, and “coordinate” in Requirement 1.4. Such verbiage is very subject to interpretation, and would be inconsistently applied in audits. AEP suggests replacing these words and phrases with more descriptive text on what action(s) is expected. Although AEP supports the overall efforts of the drafting team in revising FAC-001 and FAC-002, we strongly disagree with any inclusion of the words “coordinate” or “cooperate” and do not foresee voting in the affirmative on this standard as long as those words remain. Regarding the references to facilities which are “materially modified”, and the documentation needed to support one’s technical rationale - would such references be pre-written and establish how, in general, they are to be applied in future decision making? Or instead, would this documentation be written on a case-by-case basis for providing justification on the decision that was made in each specific instance? Please provide clarification.
Yes
Individual
Scott McGough
Georgia System Operations Corporation
Agree
Georgia Transmission Corporation
Group
DTE Electric
Kathleen Black
NERC Training & Standards Development

DTE's Distribution Operations (DO) does not own transmission or generation, however we operate generation facilities. For this reason , DO has not responded to FAX-001 in the past.
DTE's Operational & Planning Engineering recommends changing all instances of "Planning Coordinator" to "Transmission Planning Coordinator" for needed clarity.
Yes
Group
Tennessee Valley Authority
Dennis Chastain
Tennessee Valley Authority
Yes
We suggest the purpose statement be further modified to read as follows: “To ensure that Transmission Owners and applicable Generator Owners document and make their Facility interconnection requirements available so that entities seeking to establish or materially modify a Facility interconnection will have the information necessary to pursue it”. We disagree with the drafting team’s logic for using “Facilities” rather than “entities” in describing the party seeking to interconnect (used in section A.3 and A.5). The section A.4, 4.1.2.1 edit should be either “..conduct a study to evaluate the reliability impact…” or “ conduct a study on the reliability impact…”. For requirement R1, making Facility interconnection requirements “available upon request” invokes a degree of responsibility on the entity seeking to interconnect to know that the Transmission Owner has such requirements, and to ask for them. The drafting team should consider replacing “and make them available upon request” with “and provide them to an entity seeking to interconnect”. We believe the proposed revision may lack clarity in instances where the Transmission Owner, Transmission Planner and Planning Coordinator are not the same entity. For example, requirement R3 requires the Transmission Owner to address procedures for coordinated studies, presumably to be performed by the Transmission Planner and Planning Coordinator as outlined in FAC-002. There is no requirement for the Transmission Owner to develop its procedures for coordinated studies in conjunction with the Transmission Planner and Planning Coordinator who will be performing those studies.
Yes
The formatting of section A.4 - Applicability, needs work: The TP and TO are listed on the same line, 4.1.2. The LSE is rolled into section A.5 - Background. The section A.4, 4.1.2.1 edit should be either “..conduct a study to evaluate the reliability impact…” or “ conduct a study on the reliability impact…”. We suggest that the proposed R4 become R1 to better bridge from FAC-001 to FAC-002. The premise to the current R1 is that a Transmission Owner or applicable Generator Owner has been approached by another entity to either establish or modify an interconnection Facility. Requirement R1 requires the Transmission Planner and Planning Coordinator to conduct studies. In instances where these entities are not the same, could it be more appropriate for the Transmission Planner to conduct the studies and have

the Planning Coordinator review the studies; or by mutual agreement have one or the other perform the studies? If the drafting team agrees, we suggest changing the “and” to “and/or”. Also, for clarity we suggest the words “within its planning area” be added at the end of the first sentence. We believe the proposed revision may lack clarity in instances where the Transmission Owner, Transmission Planner and Planning Coordinator are not the same entity. For example, requirements R2 and R3 require entities seeking to interconnect to coordinate and cooperate on studies with the Transmission Planner or Planning Coordinator, presumably after contacting a Transmission Owner. There is no explicit requirement for the Transmission Owner to identify the Transmission Planner or Planning Coordinator that the interconnecting entity needs to work with on the studies. This could be addressed in the FAC-001-2, requirement R3 sub-requirements.
Yes
Individual
Andrew Z. Pusztai
American Transmission Company, LLC
No
ATC requests that the SDT consider the following recommendations to improve and clarify the Standard. a. Section 4.1.2.1: Please delete the second “to” in “Generator Owner with an executed Agreement to conduct a study to (DELETE) on the … ”. It did not read properly. b. Section 4.1.2.1: Please reconsider leaving the term “evaluate” in this section since replacing it with “… to conduct a study on the reliability impact…” removes the Generator Owners (GO’s) ability to evaluate and determine if a study analysis is needed. The revised wording changes the intent such that every application would need to be studied. c. Sub-requirement R1.1.3 includes End-user facilities” however, there is no requirement dealing with End Use Facilities within the Standard like there is with Generation Facilities (R1.1.1) and Transmission Facilities (R1.1.2). To address this omission, ATC recommends that Requirement R3 be revised as follows: “Each Transmission Owner and each applicable Generator Owner and Distribution Provider shall address ……” d. Section 4.1 (Applicability): Please add Section “4.1.3. Distribution Provider” since they would encompass the requirements for “End User Facilities”. e. Requirement R2: Please reconsider leaving the term “evaluate” in this section since replacing it with “… to conduct a study on the reliability impact…” removes the Generator Owners (GO’s) ability to evaluate and determine if a study analysis is needed. The revised wording changes the intent such that every application would need to be studied, even when study is unnecessary.
No
ATC does not agree with all the revisions. ATC requests that the SDT consider the following recommendations for improvement and clarification of the Standard. a. Applicability Section 4.1.6.1: Please delete the second “to” in “Generator Owner with an executed Agreement to conduct a study to (DELETE) on the … ” . It did not read properly. b. Requirement R1: Please clarify that Transmission Planners and Planning Coordinators only conduct studies

(assessments) of interconnections that may affect their respective area with the addition of wording like, ". . . or electric end-user Facilities that may affect their respective area." c. Requirement R1: Please resolve the "and" versus "or" terminology between R1 and Requirements R2-R3-R4. R1 includes an "and" that obligates Transmission Planners and Planning Coordinators to study (assess) the same facility interconnection (duplicative efforts). However, Requirements R2-R3-R4 allows the GO, TO, and DP to coordinate with only the TP or the PC. ATC recommends the wording in R1 be changed from "and" to "or". The use of "or" would allow one TP or PC to meet the requirement for other TPs or PCs, but would not prevent other TPs or PCs performing studies independently or jointly if desired. d. Requirement R1.1: Please clarify the meaning of "impact of the new or materially modified Facilities on affected system(s)". These words can be interpreted in at least two ways – (1) impact of integrating Facilities between two entities or (2) impact of integrating Facilities within a TO's system (e.g. add 138 kV line, add 345/138 kV transformer, add 138/69 kV transformer, add 138 kV capacitor bank), as well as Facilities between different entities. For Interpretation 1, possible wording could be, "impact of the new or materially modified Facilities between different entities on any affected system(s)." For Interpretation 2, possible wording could be, "impact of the new or materially modified Facilities within an entity's system, or between different entities' systems, on any affected system(s)." e. Requirement R1.2: Please clarify and improve R1.2 to require the consideration of any applicable planning criteria or interconnection requirements (e.g. regional, TO, GO, DP) and allow the affected entities to decide which of conflicting planning criteria or interconnection requirements to be applicable for the facility interconnection assessment. Possible improvement of the wording is as follows, ". . . applicable NERC Reliability Standard, applicable planning criteria, and applicable Facility interconnection requirements". f. Requirement R1.4: Please clarify that "alternatives considered" refers to the required consideration of alternatives for any necessary system modifications that would be necessary to avoid any adverse BES reliability. The requirement should only apply to needed corrective actions introduced by placing the facility interconnection in service, not a requirement to consider alternative interconnect options to the proposed facility interconnection. [If a better facility interconnection is discovered and selected, then the FAC-002-2 requirements would simply apply to the alternate facility interconnection.] Potential clarification wording could be "alternatives considered for any system modifications needed to accommodate the facility interconnection". g. Section A.5 and Requirements R1, R1.1: Please clarify the meaning of the expression, "materially modified". This expression may also be interpreted to include the partial or complete retirement of any generation, transmission, or distribution interconnection facilities. ATC believes that the retirement of interconnection facility may impact BES reliability in the planning horizon as much as interconnection facility additions or changes. If the inclusion of the retirement aspect is intended, then clarification wording should be added to Section A.5 Background. Recommended wording is as follows: "Materially modified Facilities include either additions and/or removals from exiting interconnection facilities". Otherwise, you may clarify Section A.5 by inserting the following: "Materially modified Facilities only includes additions to, not removals from, exiting interconnection facilities." h. Standard's Title plus Sections A.3, A.5 and Requirements R1, R1.4, R2, R3, R4:

Please consider the use of the term “assessment” throughout the standard rather than referencing and using the term “studies”, except for R1.3. The NERC Glossary of Terms defines the term, Planning Assessment, as “Documented evaluation of future Transmission system performance and Corrective Action Plans to remedy identified deficiencies.” The TPL standards describe system planning performance requirements in the framework of assessments that are supported by studies and analyses, as needed. In the transmission industry the term, “studies” implies the performance of simulations, but not all interconnection evaluations, particularly electricity end-user interconnections, need study or analysis. The consideration of simple information can be sufficient for some assessments. Since the purpose of FAC-002-2 appears to be the performance of Planning Assessments on proposed Facility Interconnections, we recommend that wording of the title be changed as follows: “Facility Interconnection Planning Assessments” or “Facility Interconnection Planning Performance Requirements”, instead of “Facility Interconnection Studies”.
Yes
Group
Duke Energy
Michael Lowman
Duke Energy
Yes
Duke Energy suggests a rewording of Section 4.1.2.1 of the Applicability Section due to an apparent typographical error as follows: “4.1.2.1 Generator Owner with an executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the interconnected Transmission systems.”
Yes
Duke Energy suggests a reorganization of the Applicability Section and Background Section due to an apparent clerical error as follows: “4. Applicability: 4.1. Functional Entities: 4.1.1 Planning Coordinator 4.1.2 Transmission Planner 4.1.3Transmission Owner 4.1.4 Distribution Provider 4.1.5 Generator Owner 4.1.6 Applicable Generator Owner 4.1.6.1 Generator Owner with an executed Agreement to conduct a study to on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the interconnected Transmission systems. 4.1.7 Load-Serving Entity 5. Background: The objective of FAC-002 is to ensure that the entities involved in the integration of new or materially modified Facilities conduct and coordinate studies before any interconnection occurs so that the interconnection is determined to be technically feasible and reliable. This objective supports reliability principle 1, which states that “interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards.”

Yes
Duke Energy agrees with the proposed Implementation Plan.
Individual
Venona Greaff
Occidental Chemical Corporation
Agree
Ingleside Cogeneration, LP
Individual
Chris Scanlon
Exelon
Yes
Purpose: Consider modifications to the Purpose statement, something like: To ensure Transmission Owners and Generator Owners document and make Facility connection requirements available so that Entities seeking interconnection will have the information necessary for interconnecting facilities to the bulk power system. Substitute “Entities” for “Facilities” because the action, “seeking to interconnect” is being done by an “Entity”, not a Facility. Applicability: Consider removing, “Applicable” from “Applicable Generator Owner” in 4.1.2. and add “Applicable to a“ in the sub-requirement. The Applicability section is generally limited to Registered Entity functions in the Functional Model and Registry Criteria. The “Applicable Generator” qualification in 4.1.2.1 clarifies the class of Generator Owners the standard is applicable to. 4.1.2. Generator Owner 4.1.2.1 Applicable to a Generator Owner with an executed Agreement to conduct a study to on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the interconnected Transmission systems. Requirement: R.1 Propose the SDT change “make them available upon request” to “make them available upon written request”.
Yes
Applicability: Formatting problems: 4.1.2. Separate Transmission Planner and Transmission Owner Is the LSE an applicable entity? In which case it should be 4.1.7. Section 5 Background is not formatted properly, separate it from LSE. Requirements: R1.2. elements of a study shall include, “regional and Transmission Owner planning criteria; and Facility interconnection requirements;” Please clarify use of regional. Should this say regional and or TO planning criteria and facility interconnection requirements? There are two other items we would recommend the Standard Drafting Team consider. First, for requirement R3 in the revised draft of FAC-002, we recommend that additional wording be added to allow handling the addition of smaller end-user loads to the transmission system through the normal annual reliability analysis performed by the Planning Authority or Planning Coordinator. We would recommend this for loads smaller than 20 MW. This would clarify that for these smaller end-user loads, it is not necessary for coordination to occur individually for each instance, but rather can be consolidated into the annual reliability analysis. We believe this is the most effective way to handle these smaller end-use additions. Second. We think R1.1 and R1.2 are

redundant and could be combined. See also “Consideration of Issues" document, where it states, “ Further, the SDT has proposed deleted (sic) any reference to TPL standards because it is redundant with the FAC-002-2, R1.2 requirement to evaluate compliance with all NERC Reliability Standards. To continue including a separate reference to TPL Reliability Standards is redundant and could lead to double jeopardy.” Removing reference to the TPL standards and keeping the “NERC Reliability Standards” reference seems to only partially address the issue identified by the SDT, we question whether a requirement should say evaluate compliance with other applicable Standards.
Yes
Individual
Anthony Jablonski
ReliabilityFirst
No
ReliabilityFirst Abstains and offers the following comments for consideration: 1. Applicability Section 4.1.2.1 – ReliabilityFirst notes there is an inadvertent word “to” in between the words “study” and “on”. ReliabilityFirst recommends the following for consideration: “Generator Owner with an executed Agreement to conduct a study on the reliability impact…” 2. Background Section – Within the Background section, there is reference to “objective supports reliability principle 3”. For those stakeholders who are unaware of the NERC Reliability Principles, ReliabilityFirst recommends adding a footnote to this language referencing either reliability principle 3 or a link to the NERC Reliability Principles document. 3. Requirement R1 – ReliabilityFirst recommends removing the following language, ”update them as needed”, because it is non-substantive. With the Transmission Owner documenting their Facility interconnection requirements, they are inherently updating them as well. 4. Requirement R1 – ReliabilityFirst recommends including a timeframe in which the Transmission Owner needs to make the Facility interconnection requirements available following a request. ReliabilityFirst recommends the following for consideration: “Each Transmission Owner shall document Facility interconnection requirements and make them available [within 30 calendar days] upon request.” 5. Requirement R2 - ReliabilityFirst recommends clarifiying the term “days” (i.e., is it calendar or business days?): “Each applicable Generator Owner shall, within 45 [calendar] days…” 6. Requirement R2 - ReliabilityFirst recommends including a timeframe in which the Generator Owner needs to document Facility interconnection requirements and make them available following a request. ReliabilityFirst recommends the following for consideration: “… document Facility interconnection requirements and make them available [within 30 calendar days] upon request. 7. Requirement R3 Parts 3.1 and 3.2 – ReliabilityFirst believes the terms “coordinated” and “materially” are ambiguous and open the requirement up to unnecessary interpretation. Without further clarity, these terms may lead to unintended compliance complications. ReliabilityFirst recommends removing these terms from Requirement R3, Part 3.1 and 3.2. 8. Requirement R3 – ReliabilityFirst believes several of the removed (i.e.,

prescriptive) sub-parts listed in the currently enforceable FAC-001-1Requirement R3 should remain in the requirement. ReliabilityFirst believes that the following five items apply to all applicable entities and should be required to be included within the Transmission Owners and Generator Owners Facility interconnection requirements. The remaining deleted sub-parts can be referenced in the Guidelines and Technical Basis section. The five sub-parts that ReliabilityFirst believes should be reinserted within Requirement R3 include: a. 3.1.3. Voltage level and MW and MVAR capacity or demand at point of connection. b. 3.1.5. System protection and coordination. c. 3.1.9. Voltage, Reactive Power, and power factor control. d. 3.1.11. Equipment Ratings. e. 3.1.16. Communications and procedures during normal and emergency operating conditions.

No

ReliabilityFirst Abstains and offers the following comments for consideration: 1. General Comment - ReliabilityFirst believes the term “materially”, which is used throughout the Standard, is ambiguous and opens the requirements up to unnecessary interpretation. Without further clarity and definition, this term may lead to unintended compliance complications. ReliabilityFirst recommends removing this term from the entire standard. 2. Requirement R1, Part 1.2 – ReliabilityFirst believes the term “compliance” in Requirement R1, Part 1.2 is a misapplication of this term. The term “compliance” has a specific connotation in the NERC environment. Furthermore, there is no “compliance” related to regional and Transmission Owner planning criteria and Facility interconnection requirements. ReliabilityFirst believes the term “adherence” is more appropriate in this circumstance. ReliabilityFirst recommends the following for consideration: “Evaluation of adherence to applicable NERC Reliability Standards; regional and Transmission Owner planning criteria; and Facility interconnection requirements”. 3. Requirement R2 – ReliabilityFirst believes the term “coordinate and cooperate” is ambiguous and may lead to unintended compliance implications. ReliabilityFirst also believes the language, “including but not limited to the provision of data as described in R1.1-R1.3”, is not needed and adds little value because it simply restates the language in the Requirement R1 sub-parts. ReliabilityFirst suggests the following for consideration: “Each Generator Owner seeking to interconnect generation Facilities shall [jointly participate in] studies with its Transmission Planner or Planning Coordinator.” 4. Requirement R3 - ReliabilityFirst believes the term “coordinate and cooperate” is ambiguous and may lead to unintended compliance implications. ReliabilityFirst also believes the language “including but not limited to the provision of data as described in R1.1-R1.3” is not needed and adds little value because it simply restates the language in the Requirement R1 sub-parts. ReliabilityFirst suggests the following for consideration: “Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities shall [jointly participate in] studies with its Transmission Planner or Planning Coordinator” 5. Requirement R4 - ReliabilityFirst believes the term “coordinate and cooperate” is ambiguous and may lead to unintended compliance implications. ReliabilityFirst also believes the language “including but not limited to the provision of data as described in R1.1-R1.3” is not needed and adds little value because it simply restates the language in the Requirement R1 sub-parts. ReliabilityFirst suggests the following for consideration: “Each Transmission Owner

and each applicable Generator Owner shall [jointly participate] with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its Facilities." 6. VSLs for Requirement R2, R3 and R4 – There are inconsistencies between the language in Requirement R2, R3 and R4 and the language in the corresponding VSLs that needs to be remedied. For example, Requirement R2 states "the provision of data as described in R1.1-R1.3." while the VSL states "as described in one of the parts in R.1-R1.4."
Individual
Tammy Porter
Oncor Electric Delivery
Yes
Yes
Yes
Individual
Marc Dubord
Hydro Quebec production
Agree
NPCC
Group
Florida Municipal Power Agency
Frank Gaffney
Florida Municipal Power Agency
No
The scope of this standard could be significantly narrowed or even totally eliminated. FAC 001-2 essentially remains as an administrative standard that is not a results-based standard, i.e., it requires entities to have criteria, but does not specify that criteria, making it administrative in nature. Additionally, FAC 001-2 applicability to new generator interconnections is redundant to existing FERC regulations such as the LGIA and LGIP. New end user interconnections to the transmission system may be a jurisdictional issue with state regulators and is certainly already addressed by various retail tariff or market rules. What is not necessarily covered by existing regulations are new transmission interconnections (e.g., merchant) but will in part be addressed by Order 1000, and such criteria is certainly addressed in interconnection agreements. A policy issue that must be evaluated for this and other NERC reliability standards is the overarching approach that NERC is taking with regards to existing regulations. Note that the language provided in the Consideration of Issues and

Directive paper (Page 3) completely dismisses existing regulations. The SDT points out that regardless of what is covered in a tariff, requirements for interconnecting new Facilities still need to be addressed in NERC's Reliability Standards. The requirement for Open Access Transmission Tariffs varies from region to region. FERC handles market-related documents like tariffs differently from reliability-related documents like standards, and reliability standards should not rely upon market-related documents to address reliability issues.(emphasis added) And additionally, from page 6 of the same NERC document, in response to Paragraph 81 recommendations to eliminate R1 and R2, "Reciprocity" requirements are not recognized or given any consideration: Although Facility connection requirements for public utilities are typically covered in Open Access Transmission Tariffs (OATTs) under Sections 205 and 206 of the Federal Power Act, this leaves out electric utilities such as municipalities, cooperatives, and federal entities (e.g., the Bonneville Power Administration and the Tennessee Valley Authority), which are addressed under Section 215 of the Federal Power Act. OATTs also would not apply to non-jurisdictional entities that fall in NERC's footprint (e.g., Canadian entities). Ultimately, the SDT agreed that Facility interconnection requirements are necessary for reliability and should continue to be explicitly addressed in NERC standards. These generic policy matters must be addressed; otherwise, the body of NERC standards will continue to grow exponentially with redundant administrative requirements which are not results-based. A discussion could begin with the Standards Committee regarding whether existing regulations can be completely dismissed when developing reliability standards. This generic guidance will be helpful on many fronts. If the SDT does not agree that FAC-001 can be retired, as recommended by the P81 effort, then TOs ought to be treated as GOs are; that is, most TOs will have the necessary requirements documented as part of their tariffs, including large Section 205 non-jurisdictional entities. The entities that may not are those that do not have tariffs because they are small non-jurisdictional entities where interconnection requests will be very infrequent, similar to interconnection requests to GOs. As such, if the choice is to not retire P81, then all applicable entities ought to only have to produce interconnection criteria in accordance with this standard if the entity receives such a request.
No
FMPA objects to referring to "applicable Reliability Standard in R1 bullet 1.2. Applicable to whom? The standards applicable to the PC/TP, the GO/GOP/TO/TOP, or both? We presume the intent is applicable to the PC/TP and that the PC/TP is not to evaluate the ability of a GO/GOP or interconnecting TO/TOP to meet standards applicable to them (which is specifically prohibited by Order 1000). If the intent is all standards applicable to the PC/TP, does that mean that impacts to SOLs and IROLs need to be evaluated? Do extreme contingencies need to be studied in the TPL standards? Do we need to study the impact of changes on losses on load forecasts? Do we have to reevaluate lines below 200 kV for compliance with PRC-023? If the intent is that the PC /TP has sole discretion as to what they believe is applicable, does that mean they can only study single contingencies and not N-2? In other words "applicable" is too ambiguous and FMPA recommends retaining the intent of FAC-003 to TPL-001-4 P1 through P7, or stated differently, TPL standards for non-extreme events. R2, R3 and R4 are administrative in nature, duplicative with other regulations (e.g.,

pro forma OATT), duplicative with other standards (e.g., MOD-010. MOD-012) and is not needed.
Yes
Individual
David Kiguel
David Kiguel
Yes
Clarification is suggested to indicate that reference to end-user Facilities in R1 (1.3) includes large wholesale single customer interconnections as well as Distribution Provider system interconnections.
Yes
Yes
Individual
Scott Hoggatt
Wisconsin Electric
Yes
Our only concern with the new revised standard is that the term “Applicable Generator Owner” used in requirement R2 needs to be more clearly defined. We recommend modifying the definition of the term (or in some other place if that would be more appropriate) to include example(s) of where/how this might apply; e.g. “… Applicable GOs are those whose generator interconnections to the transmission system have been deemed ‘Transmission Elements’ and who have 3rd parties seeking to interconnect to those Transmission Elements. In these situations, these GOs take on the responsibility normally assigned to the TOs to ensure these new facilities meet all the interconnection requirements specified by the NERC standards.”
Yes
• Splitting the current R1 into 3 separate requirements adds clarity to the actual duties and responsibilities associated with interconnecting new Facilities. • Deleting R2 due to paragraph 81 considerations is also very appropriate. • Our only concern with the new revised standard is that the term “Applicable Generator Owner” used in the new requirement R4 needs to be more clearly defined. We recommend modifying the definition of the term (or in some other place if that would be more appropriate) to include example(s) of where/how this might apply; e.g. “… Applicable GOs are those whose generator interconnections to the transmission system have been deemed ‘Transmission Elements’ and who have 3rd parties seeking to interconnect to those Transmission Elements. In these

situations, these GOs take on the responsibility normally assigned to the TOs to ensure these new facilities meet all the interconnection requirements specified by the NERC standards.”
Yes
Individual
Mitch Colburn
Idaho Power Company
No
No, adding the requirement to assess "modified" facilities seems ambiguous to me. Is changing a transmission structure or replacing a breaker considered a modification? We would not study such replacements. "Upgrades" seems to be a more appropriate term, but this term could still be construed as ambiguous. R5- "Planning Authority" should be modified to "Planning Coordinator," consistent with Applicability section. I do agree that separating R1 into R1-R4 seems reasonable and a cleaner approach to compliance.
Yes
Group
Southern Company: Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing
Pamela Hunter
Southern Company Operations Compliance
Yes
FAC-001 should reference the Bulk Electric System in the Purpose as FAC-002 does. To ensure that Transmission Owners and applicable Generator Owners document and make Facility connection requirements available so that Facilities seeking interconnection to the Bulk Electric System will have the information necessary for considering and pursuing that interconnection.
Yes
a. R1.2. Remove reference to compliance with NERC Reliability Standards and regional and Transmission Owner Planning criteria: Should read “Evaluation of the reliability impacts consistent with the applicable Facility Interconnection Requirements.” Reasoning: NERC Reliability Standards are not applicable to the interconnection, yet. Once service is rendered or interconnection made, then there is a firm obligation for which they apply the NERC standards. Also, “NERC Reliability Standards” is too broad and open ended. b. Remove ‘cooperate’ reference in several locations where it states “coordinate and cooperate …”. Reasoning: Cooperate is redundant since there is already a requirement to

“coordinate”(coordinate implies cooperation). c. R1. Add a requirement for the Transmission Owner and/or Transmission Planner to share interconnection study results and generator’s commitment to proceed with the Reliability Coordinator. Also include RC as applicable entity. Reasoning: There is currently a reliability gap in coordination of studies between the TP/TO and the RC for interconnection requests. Specifically, in areas where there are several TO’s and one RC, the results of an interconnection study and subsequent generators commitment to proceed may not be conveyed to the RC in time for adequate integration and verification prior to the In-Service/Synch/COD.
Yes
Group
ACES Standards Collaborators
Jason Marshall
ACES
No
(1) We disagree with the need for this standard. First, virtually every Transmission Owner of a BES Element is covered under a FERC approved tariff in the United States either under an approved regional tariff such an ISO/RTO tariff or under their own tariff. Even transmission owners whose transmission rates are not regulated by FERC have FERC approved tariffs as a result of the reciprocity requirements in the FERC pro forma tariff. These tariffs require interconnection processes, facility studies and facility connection analysis that are more rigorous than this NERC standard. This would mean this entire standard meets paragraph 81 criterion B7 in that is redundant with another regulation and is, thus, unnecessary. This criterion is very clear that “in the case of redundancy, the task or activity itself may contribute to a reliable BES, but it is not necessary to have two duplicative requirements on the same or similar task or activity. Such requirements can be removed with little or no effect on reliability and removal will result in an increase in efficiency of the ERO compliance program.” Second, the purpose statement of standard is even clear that the standard is written for commercial business practice purposes. It states “so that Facilities seeking interconnection will have the information necessary for considering and pursuing that interconnection.” How does adding another End-User Facility support the reliability operation of the BES? It does not support BES reliability, but rather supports the local End-User facility owner’s reliability which is necessary and laudable but is not covered under the statutory authority of the Energy Policy Act of 2005 which is to promote reliable operation of the Bulk Power System (BPS). (2) For R1 and R2, to whom exactly is the TO and GO supposed to make their Facility interconnection requirements available? As the requirement is written, it is open ended which means that the TO and GO would literally have to supply their Facility interconnection requirements to any party that requests them. We suggest limiting the entities to whom the TO must supply the Facility interconnection requirements to only those seeking to interconnect. (3) Part 3.1 requires procedures for coordinated studies of new or materially modified Facilities. This Part appears to be inconsistent with proposed FAC-002

which correctly requires the PC or TP to perform the Facility interconnection studies. Why would the TO need procedures for coordinated studies if they don't perform the studies? Please refine this part to further clarify what is actually required of the TO. (4) In Part 3.2, why was Transmission dropped as an adjective of system? Standards apply to the Bulk Electric System which could be thought of as the Transmission system. Thus, striking "Transmission" would imply that the purpose is to expand the requirement application beyond the Transmission system and, thus, beyond the Bulk Electric System (BES). Furthermore, "System" is defined term in the NERC Glossary that includes generation, transmission and distribution. While we understand that the term was not capitalized, thus, meaning the NERC definition does not apply, this causes further confusion because many readers will assume the non-capitalization is a mistake. Furthermore, the question becomes what definition is intended to apply if the NERC definition does not apply. For consistency, we suggest that BES would be the more correct term and cause less ambiguity. We suggest changing "system" to BES. (5) A data retention period of three years is excessive for a standard that requires Facility interconnection requirement (i.e. essentially a document). We suggest a data retention period of no longer than one year and possibly to simply retain the most recent Facility interconnection requirements documents.

No

(1) We disagree with the need for this standard. First, virtually every transmission owner of a BES Element is covered under a FERC approved tariff in the United States either under an approved regional tariff such an ISO/RTO tariff or under their own tariff. Even most transmission owners whose transmission rates are not regulated by FERC have FERC approved tariffs as a result of the reciprocity requirements in the FERC pro forma tariff. Those tariffs require interconnection processes, facility studies and facility connection analysis, which are more rigorous than this NERC standard. This would mean this entire standard meets paragraph 81 criterion B7 in that is redundant with another regulation and is, thus, unnecessary. This criterion is very clear that "in the case of redundancy, the task or activity itself may contribute to a reliable BES, but it is not necessary to have two duplicative requirements on the same or similar task or activity. Such requirements can be removed with little or no effect on reliability and removal will result in an increase in efficiency of the ERO compliance program." Second, this standard has a major gap that cannot be addressed or closed due to the registration process. This proposed standard cannot be applicable to an entity wishing to interconnect a generator that is not already registered as a Generation Owner. The NERC registration framework does not allow prospective registration and it should not. This further highlights why this standard is not necessary and why the tariff processes are necessary, important, and fully address the issue making the standard superfluous. (2) If this standard persists, it should only apply to the entity that has the tariff that requires the study whether that entity is the PC, TP or some other entity. All requirements applying to non-study entities (i.e. GO, TO, DP, LSE) should be removed. The study entity is responsible per tariff processes and requirements to ensure studies are completed to assess reliability impacts and that the interconnection will meet all planning criteria and standards. The gap previously highlighted regarding a never before registered entity requesting an interconnection highlights why it is truly the entity that has the tariff

that has the responsibility to complete the studies. It is their tariff that will ensure an entity that is not NERC registered will be interconnected in a reliable manner. It is their tariff that allows them to curtail the interconnection process if the interconnection requestor does not follow the interconnection process (e.g. supplying necessary and timely data). This will provide more incentive for an interconnection requestor that truly needs the new interconnection than a NERC standard ever will. (3) The purpose needs to be modified. The purpose is simply to study the impact of new or materially modified Facility interconnections. It is not to coordinate studies. While coordination may be required, it is ambiguous and does not define the purpose. Please strike "and coordinating" from the purpose statement. (4) Applicability section 4.1.6.1 has a grammatically error. Remove "to" from the phrase "to on the reliability impact". (5) Part 1.2 is redundant, creates potential for double jeopardy, is ambiguous and can be interpreted many ways which can only lead to inconsistent compliance outcomes. First, what does it mean to evaluate compliance against NERC Reliability Standards in terms of a Transmission Planner or Planning Coordinator studying the reliability impacts of a Facility interconnection? Does this mean the PC and TP must evaluate compliance against their requirements or against the requirements of the requestor (i.e. DP, GO, or TO)? Second, these other NERC requirements still apply without this reference in this Part 1.2. Thus, a violation of those requirements in the other standards will also necessarily cause a violation of this part resulting in double jeopardy. Please strike the portion of this requirement that references evaluating the studies against compliance with other NERC reliability standards. (6) Part 1.4 meets Paragraph 81 criteria, is ambiguous which can only lead to inconsistent compliance outcomes and may be inconsistent with FERC approved tariffs. With who exactly are the recommendations to be coordinated? The interconnecting requesting entity? If so, that would violate FERC approved tariffs because it is the FERC transmission provider (i.e. tariff administrator) that is responsible for conducting studies and determining what is required to interconnect. Also, what does it mean to coordinate with the entities involved? Coordination is vague and not measurable which again will lead to inconsistent compliance outcomes. If the part is retained it should state exactly what is required to coordinate and not use this term. If the SDT cannot define what is meant by coordination, then they should question if the requirement is truly necessary. Furthermore, Part 1.4 meets Paragraph 81 criteria because it is administrative (criterion B1) in nature and requires documentation (criterion B3) which is not necessary to protect the reliability of the BES. Think of it this way. Would absence of this document cause a BES reliability problem or a compliance problem (i.e. proving the study was completed)? We believe it is the latter because if the document does not exist the study may still have been completed and not the former and the part should be struck in its entirety. Obviously, the need to comply would incent the applicable entity to document the study which further supports it removal or moving it to the application guidelines section. (7) If Requirement R3 persists, Load-Serving Entity should be removed from the requirement. While the functional model does indicate that the LSE has some responsibility in determining the need for a new Facility interconnection, this is not the same as seeking or requesting a new Facility interconnection. The functional model is clear that the DP has this responsibility with the statement that the DP develops interconnection agreements with TOs on a facility basis. Part of the end result of

a Facility interconnection process is an interconnection agreement. Thus, while the DP may have to work with the LSE if they are different, it is the DP that has the responsibility to submit the request, submit the data, follow the process and develop the interconnection. Furthermore, they will not be different entities because section III.a.4 of Appendix 5B – Statement of Compliance Registry Criteria in the Rules of Procedure is clear that a DP will also be registered as an LSE so inclusion of the LSE is redundant. (8) If Requirements R2, R3, and R4 persist, they need to be revised because they are ambiguous which will lead to inconsistent compliance outcomes and are inconsistent with R1. First, what does coordinate and cooperate mean? How will it be measured? Will the PC or TP be asked by auditors if they feel the interconnection requestor cooperated? Coordination and cooperation are terms that are vague when used in standards requirements and nearly impossible to measure compliance against. Based on other language in the requirements and the VSL language, the purpose appears to be focused on ensuring that the applicable entities supply data. If this is what is intended, then the requirements should state this directly rather than using vague language such as coordinate and cooperate. Either way, this language needs revisions if the requirements persist. Second, each of the requirements state that data shall be provided as described in R1.1 through R1.3. There is no data described in Part 1.1 through Parts 1.3. Rather these parts describe what the studies must include. Third, there are not sub-requirements and these requirements should not use the R descriptor for R1.3 through R1.3. Rather, these should be referred to as Parts 1.1 through 1.3. In previous guidance provided to the Commission, NERC has declared that they will no longer write standards with sub-requirements but rather with numbers lists that must all be met referred to as parts or bulleted lists with options.
No
We believe the implementation plan should be modified to reflect the complete retirement of these standards based on the reasons stated in questions 1 and 2. Thank you for the opportunity to comment.
Individual
Bill Temple
Northeast Utilities
Yes
suggest capitalizing “Applicable Generator Owner” throughout the standard (backround and requirements)
Yes
suggest capitalizing “Applicable Generator Owner” throughout the standard (backround and requirements) R1.1, R1.2, R1.3 seem to be duplicative. Evidence presented to show compliance would be identical for these 3 requirements.
Yes
Individual

Dan Inman
Minnkota Power Cooperative
MRO's NERC Standards Review Forum (NSRF)
No
Please clarify the scope of the requirements. It should be limited to interconnections to the BES, correct? According to the Background information on page 5 of 15, under "5. Background", the objective supports reliability principle 3, which refers to the “bulk power systems.” R3.1 Clarify the meaning of the expression, “materially modified”. The expression can be interpreted to include the partial or complete retirement of any generation, transmission, or distribution interconnection facilities. R3.2: "those responsible for the reliability of the interconnected affected Transmission system(s)" is vague, is this the intent of the SDT? Should this be more prescriptive and identify the appropriate NERC Registered Function, such as Reliability Coordinator?
No
R1.2 Which T.O.’s planning criteria apply, the T.O. that received the interconnection request, or the affected system T.O.? R1.4 could be revised for clarity between the assessment and the resulting report. As an example; “Documentation of the study assumptions, alternatives considered, and coordinated recommendations used in the assessment. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.”
Yes
Group
Florida Power & Light
Mike O'Neil
Florida Power & Light
Yes
The revised requirements will necessitate some revisions to FPL’s Facility Connection Requirements document (as an example, changing connection requirements to interconnection requirements where appropriate) however the changes are easily manageable within the proposed implementation plan timeframe.
No
The revision wording is only a slight improvement to the original poorly crafted standard, and now seems repetitive in requirements 2, 3, and 4. (Appears that R2 and R3 can be combined, and the “gap” that R4 is trying to address is not clear.) The fact that FAC-002-1 R1 now requires studies instead of assessments is a slight concern because we already perform Generator Interconnection Studies for customers under the FERC OATT with prescriptive language to meet the FERC requirements. At least for generator interconnections, the required study would be duplicative, whereas an assessment of the study might be more appropriate. Also, the phrase in R2, R3, and R4 “including but not limited to the provision of

data, as described in R1.1 – R1.3." seems circular because the sub-requirements do not refer to provision of any data, although data would be required to perform the evaluations that R1.1-R1.3 refer to, and coordination and cooperation should be required to get any necessary data. The phrase should be replaced with just a period. Similarly, the Measures for R2, R3, and R4 have a circular reference phrase "that it met all requirements in Rx." The phrase should be replaced with "that it coordinated and cooperated, to the extent requested by its Transmission Planner or Planning Coordinator." Finally, the clean draft has the TP and TO on the same line under Functional Entities in the Applicability section. They should be separate.
Yes
Assuming that FAC-002-1 is revised to further clarify.
Individual
Spencer Tacke
Modesto Irigation District
No
I am voting NO on the proposed revisions to both standards for the following reasons: 1, FAC-002-2 refers to its applicability to the BES, while FAC-001-1 does not mention being applicable to the BES at all, yet the two standards are a pair that are interdependent. This will lead to confusion and mis-application of these two standards by NERC members. 2. In FAC-002-2 in section 1.4 (proposed 1.3), deleting the specific requirements to perform steady-state and dynamics studies in accordance with NERC TPL-001 through TPL—003 is a mistake. We would be changing from very specific and good requirements, to no specific requirements at all. 3. In FAC-002-2 in section 5 (Background), it is confusing to use the term "interconnected bulk power system" if what is meant is the BES. Otherwise, they should define what they specifically mean by "interconnected bulk power system". 4. Also, in general, the proposed changes for FAC-001-1, with the exception of the first two under Purpose and Background, actually de-clarify the requirements instead of clarifying them. Thanks. Sincerely, Spencer Tacke MID
Group
ISO/RTO Council Standards Review Committee
Gregory Campoli
New York Independent System Operator
No
All three requirements R1, R2 and R3 lists the Time Horizon to be Long-term Planning. In many ISOs and RTOs, proposed Interconnections can fall under either Near-term Planning or Long-term-Planning. The NERC Glossary defines Long-term as 6 to 10 years out and beyond, and Near-term as 1 to 5 years out. Some ISOs' interconnection studies use base cases that

are 5-years out. We would suggest that the Time Horizon in FAC-001-2 to include Near-term Planning as well.
No
Below are some comments/proposed changes for consideration: a. Applicability Section 4.1: Suggest adding Load-Serving Entity in view of the responsibility assigned to these entities in Requirement R3. b. Applicability Section 4.1.2: Split Transmission Planner and Transmission Owner. c. Applicability Section 4.1.5: Applicable Generator Owners: The word “to” in the part “…a study to on the reliability impact…” should be removed. Also, suggest to combine 4.1.5 with 4.1.5.1 by revising 4.1.5 to: 4.1.5 Generator Owner with an executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the interconnected Transmission systems. d. Similar comments on Time Horizon as indicated in Q1, above, for FAC-001-2 also apply to the four requirements in FAC-002-2. e. Requirement R1: We do not believe R1 is needed. The need for the PC and TP to conduct studies to assess reliability impacts of proposed additions/modification by TOs, DPs and GOs is not identified or stipulated in the existing FAC-002-1. While we agree that PC and TP have a role to review and coordinate studies by entities that propose to add new or modify existing Facilities, their role should be to review and concur/approve the proponent’s assessments only. Wrt considering impacts of the proposed additions/modifications, in the PC’s and TP’s periodic assessments to meet the TPL standard requirements, they are already required to consider and include approved and proposed Facility changes in their impacts assessed. Stipulating this requirement in the FAC-002 standard will result in duplicating with the TPL standard. We suggest removing R1 from the standard. (The CAISO wishes to be excluded from the comment provided above under bullet "e.") The obligation to assess and demonstrate reliability impact/performance on the affected system(s) should be placed on the TO/TP of the affected system(s) to study their own system, with the proponents themselves (i.e., the GO, TO, DP, LSE, and not the PC) initiating the interconnection study process with the TO/TP of the affected system(s). f. If the SDT should decide to retain R1, then we would suggest the following changes: i. R1 should have an “or” instead of “and” as shown below to be consistent with the terminology used in the VSLs. R1. Each Transmission Planner or each Planning Coordinator shall conduct studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities. ii. R1.1 We recommend continuing to use the original terminology of: “interconnected transmission systems” rather than “affected system(s).” The use of the term “affected system(s)” is not clear, as FERC uses the term affected systems as being neighboring systems other than one’s own system. iii. R1.2 Add: Planning Coordinator planning criteria. R1.2 should include Planning Coordinator planning criteria. The use of the term “regional” is unclear as to whether or not it includes Planning Coordinator planning criteria. We suggest modifying R1.2 to read: R1.2 Evaluation of compliance with applicable NERC Reliability Standards; regional criteria, Planning Coordinator planning criteria, Transmission Owner planning criteria; and Facility interconnection requirements; iv. For R2-R4, should add: “or materially modify” as in “seeking to interconnect or materially modify generation Facilities”. v. R2-R4, should add: “including but not limited to the provision of data for the required studies”. We suggest

modifying the language in R2-R4 to read: Each entity (GO, TO, DP, LSE) seeking to interconnect or materially modify generation Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data for the required studies as described in R1.1-R1.3. The SRC would also like to raise the following issue as a general matter: The SRC requests that the Standard Drafting Team assess whether these Requirements conflict or are redundant from regulatory requirements that exist under FERC's Pro Forma Generator Interconnection rules. For example, under proposed FAC-002, R2, "Each Generator Owner seeking to interconnect generation Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3.". FERC's pro forma Generator Interconnection rules already specify all requirements that a Generator Owner must meet to get a new or materially modified unit interconnected to the transmission system. It is unclear from a chronological perspective if these requirements need to be met and be demonstrable for every proposed facility that gets included in a planning study or is only applicable for those that have reached a stage of construction. By the time entities commit to construction of facilities, the aforementioned steps of coordination and studies will have already been met making these requirements moot.
Yes
Individual
Patrick Farrell
Southern California Edison Company
No
The Planning Coordinator is the only appropriate entity for coordination of affected system impacts. As R3.1 is currently written, the Transmission Owner is responsible for developing procedures, which would only work well if the TO is also its own PC and BA. In the case where a TO is not a BA or PC, as is found in an ISO or RTO framework, the responsibility for coordinating impacts to affected systems falls on the ISO or RTO. As written, R3.1 creates a disconnect between the compliance responsibility to coordinate affected system impacts and the ISO's tariff obligation. Essentially, the compliance burden of an ISO function is being placed on a TO in a case where the two functional entities are not the same. SCE believes that coordinating impacts to affected systems more appropriately belongs in FAC-002-2 – Facility Interconnection Studies and should be assigned to the Planning Coordinator. This approach will work within an ISO/RTO framework, as well as in cases where the TO is also the PC. SCE proposes removing "and their impacts to affected systems" from R3.1 and completely removing R3.2. FAC-002-2 should include a new requirement (R5) to identify the Planning Coordinator's responsibility to coordinate the impact to affected systems.
No
Thank you for adding clarity while removing redundancies. Although SCE agrees with the proposed revisions in FAC-002-2, we feel that a new requirement (R5) needs to be added in

order to properly identify the Planning Coordinator's responsibility to coordinate the impact to affected systems. Justification for this recommendation can be found in SCE's comments on FAC-001-2.
Yes
Individual
Ayesha Sabouba
Hydro One
Yes
No
A. Requirement 1.1 is the repeat of R1 itself and doesn't add any clarity or specificity to "evaluation of reliability impact" which is already required by R1. Requirement 1.1 should be deleted (the phrase "on affected system(s)" could be added to R1.) B. Requirement 1.2, "Evaluation of compliance with applicable NERC Reliability Standards" is too broad. The "applicable NERC Reliability Standards" include all aspects of operation as well as planning, some of which are difficult or impossible for Planning Coordinator and Transmission Planner to evaluate or enforce at the time of connection assessment. Examples are requirements in TOP and PRC standards that are not the PC and TP expertise and applicability. The scope of R1.2 should be limited to only those NERC Reliability Standards that are applicable to PC and TP (mainly the TPL standards). C. At the core of FAC-002, for which PC and TP have direct role, is Requirement 1.3 and it should be given more emphasis, with specific requirement to perform the studies to ensure compliance with TPL standards.
Individual
Scott Berry
Indiana Municipal Power Agency
Agree
Indiana Municipal Power Agency supports the comments submitted by Florida Municipal Power Agency (FMPA). In addition, IMPA believes there is a format issue on FAC-002-2 in the applicability section. Requirement R3 requires the LSE to perform a task but LSE is not listed in the applicability section which is number 4. Instead, LSE is listed as number 5 and is listed after the applicability section, therefore, LSE is not listed in the applicability section.
Group
Arizona Public Service Company
Janet Smith
Arizona Public Service Company
Yes

Yes
Although AZPS appreciates the effort to better reflect industry processes, AZPS would like the drafting team to verify that the new requirement will have no impact on the Transmission Planner's processes, including financial elements, for completing the necessary studies as described in the entity's Open Access Transmission Tariff.
Yes
Individual
Richard Vine
California ISO
No
Comments: Although in general we are supportive of the proposed revisions to FAC-002-2, we have several comments as listed below that we request the SDT to address: • R1 should have an "or" instead of "and" as shown below to be consistent with the terminology used in the VSLs. R1. Each Transmission Planner or each Planning Coordinator shall conduct studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities. • The Time Horizon for all of the FAC-002-2 Requirements, particularly R1, should include: "Near-term Planning or Long-term Planning" Time Horizon: [Near-term Planning or Long-term Planning] • R1.1 We recommend continuing to use the original terminology of: "interconnected transmission systems" rather than "affected system(s)." The use of the term "affected system(s)" is not clear, as FERC uses the term affected systems as being neighboring systems other than one's own system. • Regarding R1 and R1.1: The obligation to assess and demonstrate reliability impact and performance on the affected system(s) [or interconnected transmission systems] should be placed on the TO/TP of the affected system(s) [or interconnected transmission systems] to study their own system(s) and identify necessary mitigations, with the project proponents themselves (i.e., the GO, TO, DP, or LSE) initiating the interconnection study process with the TO/TP of the affected system(s)." • R1.2 Add: Planning Coordinator planning criteria R1.2 should include Planning Coordinator planning criteria. The use of the term "regional" is unclear as to whether or not it includes Planning Coordinator planning criteria. We suggest modifying R1.2 to read: R1.2 Evaluation of compliance with applicable NERC Reliability Standards; regional criteria, Planning Coordinator planning criteria, Transmission Owner planning criteria; and Facility interconnection requirements; • For R2-R4, should add: "or materially modify" as in "seeking to interconnect or materially modify generation Facilities" • R2-R4, should add: "including but not limited to the provision of data for the required studies" We suggest modifying the language in R2-R4 to read: Each entity (GO, TO, DP, LSE) seeking to interconnect or materially modify generation Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data for the required studies as described in R1.1-R1.3.

Yes
Individual
Chang G. Choi
City of Tacoma - Tacoma Power
Yes
Yes
Yes
Group
SPP Standards Review Group
Shannon V. Mickens
Southwest Power Pool Inc.
Yes
While we generally agree with the proposed revisions, we have the following recommendations for the SDT to consider. Delete the 'to' at the end of the first line of Applicability section 4.1.2.1. The Rationale box for Requirement R3 contains a reference to subparts of R3. Other recently approved standards, most notably CIP-014-1 referred to subparts as Parts. We suggest that the SDT use this same format in the proposed FAC-001-2. Insert 'Parts 3.1 – 3.2' following Requirement R3 at the end of M3. Replace '…R1.1, R1.2 or R1.3.' at the end of the Moderate and High VSLs for R1 with '…Requirement R1, Parts 1.1 – 1.3. Replace '…R3.1 or R3.2…' in the High and Severe VSLs for R3 with '…Part 3.1 or Part 3.2…'. Under Requirement R3 in the Guidelines and Technical Basis, replace 'subparts' in the 1st and 5th lines with 'parts'. Also, insert a 'the' between 'to' and 'Guidelines' in the 2nd line of the same paragraph. Insert a 'the' in the 3rd bullet between the 'at' and the 'point' in the 2nd paragraph under Requirement R3 of the Guidelines and Technical Basis section.
Yes
Again, while we generally agree with the proposed revisions, we have the following recommendations for the SDT to consider. Delete the 'to' at the end of the first line of Applicability section 4.1.2.1. In Part 1.3 of Requirement R1 insert commas such that the 2nd line reads '…dynamics studies, as necessary, to evaluate…'. Replace 'R1.1 – R1.3' in Requirements R2, R3 and R4 with 'Requirement R1, Parts 1.1 – 1.3'. Replace 'in its studies one of the parts in R1.1 –R1.4.' with 'one of Parts 1.1 through 1.4 in its studies.' at the end of the Lower VSL for R1. Make a similar change in the Moderate and High VSLs for R1. Replace 'in one of the parts in R1 – R1.4.' with 'one of Requirement R1, Parts 1.1 through 1.4.' at the

end of the Lower VSL for R2. Make a similar change in the Moderate and High VSLs for R2. Make similar changes in Requirements R3 and R4.
Yes
Individual
D Mason
HHWP
Yes
The background section includes the langauge, "This objective supports reliability principle 3", without any indication of the policy or document that this "reliability principle 3" is part of.
Yes
The background section includes the langauge, "This objective supports reliability principle 1", without any indication of the policy or document that this "reliability principle 1" is part of. This reference to "reliability principle 1" should be changed to make clear what body of policy it comes from. Requirement R2 states that "Each Generator Owner ... shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator". It is recommended that the word "its" be replaced with "the appropriate". This recommendation is based on the observation that may GO's are working within multiple TP and PC areas.
Yes

Consideration of Comments

Project 2010-02 Connecting New Facilities to the Grid

The FAC Drafting Team thanks all commenters who submitted comments on the proposed revisions to FAC-001-1 and FAC-002-1. These standards were posted for a 45-day public comment period from April 1, 2014 through May 15, 2014. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 50 sets of comments, including comments from approximately 146 different people from approximately 110 companies representing all 10 Industry Segments as shown in the table on the following pages.

Based on stakeholder feedback and additional review, and in addition to correcting typographical errors and numbering inconsistencies, the SDT has made the following non-substantive changes to the standards to add clarity without changing meaning or intent:

FAC-001-1

- **Purpose:** The SDT modified the Purpose to include a reference to reliability and to the Bulk Electric System, for consistency with the Purpose in FAC-002-2. The SDT changed "Facility connection requirements" to "Facility interconnection requirements" for consistency with the language used elsewhere in FAC-001-2 and FAC-002-2. The SDT also inserted the term "must" to maintain the previously stated objective of the standard – to protect the integrity of the Bulk Electric System by guaranteeing that entities have access to essential information when seeking interconnection. The SDT changed "Facilities" to "entities" per stakeholder comments that "Facilities" do not seek interconnection. While the SDT originally used "Facilities" for interconnections that involve non-NERC entities, in keeping with the logic of the Project 2010-07 – Generator Requirements at the Transmission Interface drafting team, it believes that the undefined term "entities" is broad enough to account for a variety of interconnections. The phrase "necessary for considering and pursuing that interconnection" was deemed superfluous and has been deleted.
- **Applicability:** The SDT added "fully" to 4.1.2.1 for consistency with the reference to "full execution of an Agreement" in R2. The SDT has deleted the word "to," which was a typographical error. "Interconnected Transmission systems" was changed to "Transmission system." "Interconnected Transmission systems" was only used in the Project 2010-07 revisions to FAC-001-0 for conformance with language in FAC-002-1. That language is not used in the proposed FAC-002-2, and thus it makes more sense to use the clearer "Transmission system."
- **Background:** Because many commenters were confused about the reference to the reliability principles (which are referenced in the NERC Standard Processes Manual and posted as a resource document on NERC's Standards Resources page), the drafting team has deleted that

sentence from the Background section. Without the section about the reliability principles, the Background too similar to the Purpose to add value, so the Background has been deleted.

- **R1:** The first words in the Parts of R1 were made lowercase to make clear that the terms are not referring to the NERC Glossary of Terms.
- **R2:** To ensure that the "what" of the requirement – the action required – is clear, the SDT moved the phrase that begins with "within 45 days…" to the end of the requirement. The SDT added "calendar" between "45" and "days," as was the intention of the SDT (and was already reflected in the VSLs). "Interconnected Transmission systems" was changed to "Transmission system," as explained in the summary of changes to the Applicability section, above.
- **R3, Part 3.2:** Similar to the change in R2, the SDT rearranged the words in this Part for clarity, without changing the meaning of the requirement.
- **R4:** Because an applicable Generator Owner that has already interconnected a Facility to its own Facilities would be required to register as a Transmission Owner, there is no need for applicable Generator Owners to be concerned with procedures regarding material modifications. This is why there is no "update as needed" requirement in R2; the SDT expects the requirement to apply in the time period between Agreement for interconnection, when an applicable Generator Owner is still registered as such, and the moment of interconnection, when an applicable Generator Owner also must register as a Transmission Owner. In the original R3, the SDT believed that an applicable Generator Owner could "address" procedures for materially modifying existing interconnections by indicating that such procedures were not applicable. Upon further review, the SDT believes it is clearer to create two requirements, R3 and R4, to mirror the construction of R1 and R2. Otherwise, the requirements for both Transmission Owners and applicable Generator Owners remain exactly the same, but the addition of R4 makes clearer that applicable Generator Owners need not be concerned with addressing materially modifying existing interconnections.
- **VSLs:** The VSLs were modified to conform with the minor changes to the requirement language. The High VSL for R1 was modified to better distinguish it from the Moderate VSL for R1.
- **Guideline and Technical Basis:** The SDT added some language to carry the consideration of materially modified existing interconnections through to the Guidelines and Technical Basis section. Because a Transmission Owner or applicable Generator Owner cannot compel another entity to comply with NERC's standards (and can only give the other entities a list of Facility interconnection requirements that will ensure reliability once the interconnection is made), the final sentence of the Guidelines and Technical Basis section has been deleted, as it was determined to be meaningless.

FAC-002-2

- **Purpose:** The word "evaluate" was changed to "study" for clearer conformance to the language of the standard, and the reference to conducting and coordinating was deleted to keep the Purpose appropriately high-level.
- **Applicability:** In the last posting of the standard, Transmission Planner and Transmission Owner appeared on the same line of the Applicability section, and Load-Serving Entity appeared in the Background section instead of the Applicability section. Both errors have been corrected. The SDT added "fully" to 4.1.2.1 for consistency with the reference to "full execution of an Agreement" in FAC-001-2, R2. The SDT has deleted the word "to," which was a typographical error.
- **Background:** Because many commenters were confused about the reference to the reliability principles (which are referenced in the NERC Standard Processes Manual and posted as a resource document on NERC's Standards Resources page), the drafting team has deleted that sentence from the Background section. Without the section about the reliability principles, the Background too similar to the Purpose to add value, so the Background has been deleted.
- **R1:** To keep terminology consistent, the SDT changed "integrating" to "interconnecting." The SDT also tightened the main requirement language by changing "conduct studies on" to "study" and removing the redundant "Evaluation of" and "Documentation that…" in the Parts. Throughout FAC-002-2, and in the main requirement language and Part 1.1, the SDT added "existing" to descriptions of material modification to draw a better distinction between new interconnections and materially modified existing interconnections.
- **R1, Part 1.2:** Because "compliance" has a specific connotation in the NERC environment and, even when it comes to NERC Reliability Standards, the standard should not give the impression that the Planning Coordinator or Transmission Planner is responsible for the interconnecting entity's future compliance with NERC Standards. The SDT has changed "compliance" to "adherence" to retain the original intended meaning – that the Transmission Planner or Planning Coordinator consider all applicable NERC Reliability Standards as it studies a possible new interconnection or material modification to an existing interconnection – but reflect the fact that the entities cannot actually enforce future compliance with the Reliability Standards.
- **R2-R4:** To better connect with the reference to "material modifications" in R1, the SDT has added references to material modifications in R2, R3, and R4. It has also changed the references to subrequirements to "R1, Parts 1.1-1.4."
- **R5:** Because an applicable Generator Owner that has already interconnected a Facility to its own Facilities would be required to register as a Transmission Owner, there is no need for applicable Generator Owners to be concerned with studies regarding materially modifying existing interconnections. The SDT believes it is clearer to create two requirements, R4 and R5, to mirror the construction in FAC-001-2. Otherwise, the requirements for both Transmission Owners and applicable Generator Owners remain exactly the same, but the addition of R5

makes clearer that applicable Generator Owners need not be concerned with addressing materially modifications to existing interconnections.

The SDT has provided responses to all stakeholder comments below, in the "Summary Consideration" section of each question. All comments submitted may be reviewed in their original format on the standard's project page.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Director of Standards, Valerie Agnew, at 404-446-2566 or at valerie.agnew@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Standard Processes Manual: http://www.nerc.com/comm/SC/Documents/Appendix_3A_StandardsProcessesManual.pdf

Index to Questions, Comments, and Responses

1. **The SDT has proposed the following key revisions to FAC-001-2: • Revised the title and purpose to reflect the language in the requirements. • Removed the reference in R1 to: "…compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements" because it is redundant with FAC-002, R1.2. • Moved all of the subparts in R3, except for R3.1 and R3.2, and to the Guidelines and Technical Basis section. The SDT wants to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as subparts of R3 was deemed too prescriptive, as frequently some items in the list will not apply to all applicable entities – and some applicable entities will have requirements that expand upon the list. The Guidelines should be used as a starting point for each Transmission Owner and applicable Generator Owner to consider in the development of Facility interconnection requirements. • Modified R3 to ensure that the impact on third parties is appropriately addressed. • Retired R4. • Updated all compliance elements: updated the Measures to add examples of acceptable evidence; modified the VSLs for conformance with the updated requirement language; modified the VRFs for conformance with NERC's VRF guidelines; added Time Horizons to each requirement**.....16
2. **The SDT has proposed the following key revisions to FAC-002: • Revised the title and purpose to reflect the language in the requirements. • Rearranged the order of Functional Entities in the Applicability section to reflect the order in the Functional Model; changed "Planning Authority" in the applicability section to "Planning Coordinator" to reflect the Functional Model, as well as the recently revised TPL-001-4; added "Applicable Generator Owner" to the Applicability section so that R4 does not require a reference to FAC-001 • Separated R1 into four requirements to add clarity and better distinguish the actions required of the applicable entities. • Revised the subparts of R1 to remove elements that are more appropriate for Measures. • Modified R1.1 to ensure that the impact on third parties is appropriately addressed. • Modified R1.4 to remove the reference to the TPL Reliability Standards to avoid redundancy with the R1.2 reference to "all NERC Reliability Standards." • Updated all compliance elements: added Measures, VRFs, and Time Horizons to each requirement; modified the VSLs for conformance with the updated requirement language**.....44
3. **Do you agree with the timeline for implementation as proposed in the Implementation Plan** 84

The Industry Segments are:

1 — Transmission Owners
2 — RTOs, ISOs
3 — Load-serving Entities
4 — Transmission-dependent Utilities
5 — Electric Generators
6 — Electricity Brokers, Aggregators, and Marketers
7 — Large Electricity End Users
8 — Small Electricity End Users
9 — Federal, State, Provincial Regulatory or other Government Entities
10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Louis Slade	Dominion										X

	Additional Member	Additional Organization	Region	Segment Selection
1.	Mike Garton	NERC Compliance Policy		1, 3, 5, 6
2.	Connie Lowe	NERC Compliance Policy		1, 3, 5, 6
3.	Randi Heise	NERC Compliance Policy		1, 3, 5, 6
4.	Chip Humphrey	Power Generation Compliance		
5.	Jarad L Morton	Power Generation Compliance	NPCC	5
6.	Larry Whanger	Power Generation Compliance	SERC	5
7.	Nancy Ashberry	Power Generation Compliance	RFC	5
8.	Angela Park	Electric Transmission Compliance	SERC	1, 3
9.	Candace L Marshall	Electric Transmission Compliance	SERC	1, 3

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
10. Larry Nash	Electric Transmission Compliance	SERC 1, 3										
11. Larry W Bateman	Electric Transmission Compliance	SERC 1, 3										
12. Jeffrey N Bailey	Nuclear Compliance	SERC 5										
13. Tom Huber	Nuclear Compliance	NPCC 5										
2. Group	Guy Zito	Northeast Power Coordinating Council										

	Additional Member	Additional Organization	Region	Segment Selection
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10
2.	David Burke	Orange and Rockland Utilities Inc.	NPCC	3
3.	Greg Campoli	New York Independent System Operator	NPCC	2
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
5.	Ben Wu	Orange and Rockland Utilities Inc.	NPCC	1
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10
7.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5
8.	Matt Goldberg	ISO - New England	NPCC	2
9.	Michael Jones	National Grid	NPCC	1
10.	Mark Kenny	Northeast Utilities	NPCC	1
11.	Christina Koncz	PSEG Power LLC	NPCC	5
12.	Helen Lainis	Independent Electricity System Operator	NPCC	2
13.	Alan MacNaughton	New Brunswick Power Corporation	NPCC	9
14.	Bruce Metruck	New York Power Authority	NPCC	6
15.	Wayne Sipperly	New York Power Authority	NPCC	5
16.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10
17.	Robert Pellegrini	The United Illuminating Company	NPCC	1
18.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1
19.	David Ramkalawan	Ontario Power Generation, Inc.	NPCC	5
20.	Brian Robinson	Utility Services	NPCC	8
21.	Ayesha Sabouba	Hydro One Networks Inc.	NPCC	1
22.	Brian Shanahan	National Grid	NPCC	1

3. Group	Steve Hill	NCPA Generation				X	X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Hari Modi	NCPA	WECC	5

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
4.	Group	Sandra Shaffer	PacifiCorp						X				
No Additional Responses													
5.	Group	Joe DePoorter	MRO NERC Standards Review Forum	X	X	X	X	X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Amy Casuscelli	Xcel Energy	MRO	1, 3, 5, 6
2.	Chuck Wicklund	Otter Tail Power	MRO	1, 3, 5
3.	Dan Inman	Minnkota Power Coop	MRO	1, 3, 5, 6
4.	Dave Rudolph	Basin Electric Power Coop	MRO	1, 3, 5, 6
5.	Kayleigh Wilkerson	Lincoln Electric System	MRO	1, 3, 5, 6
6.	Jodi Jensen	WAPA	MRO	1, 6
7.	Joseph DePoorter	Madison Gas & Electric	MRO	3, 4, 5, 6
8.	Ken Goldsmith	Alliant Energy	MRO	4
9.	Mahmood Safi	Omaha Public Power District	MRO	1, 3, 5, 6
10.	Marie Knox	MISO	MRO	2
11.	Mike Brtowski	Great River Energy	MRO	1, 3, 5, 6
12.	Randi Nyholm	Minnesota Power	MRO	1, 5
13.	Scott Bos	Muscatine Power & Water	MRO	1, 3, 5, 6
14.	Scott Nickles	Rochester Public Utilities	MRO	4
15.	Terry Harbour	MidAmerican Energy	MRO	1, 3, 5, 6
16.	Tom Breene	Wisconsin Public Service	MRO	3, 4, 5, 6
17.	Tony Eddleman	Nebraska Public Power District	MRO	1, 3, 5

6.	Group	Cindy Stewart	FirstEnergy	X		X	X	X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	William Smith	FirstEnergy Corp	RFC	1
2.	Douglas Hohlbaugh	Ohio Edison	RFC	4
3.	Kenneth Dresner	FirstEnergy Solutions	RFC	5
4.	Kevin Querry	FirstEnergy Solutions	RFC	6

7.	Group	Kaleb Brimhall	Colorado Springs Utilities	X		X		X	X				
No Additional Responses													
8.	Group	Kathleen Black	DTE Electric			X	X	X					

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10

	Additional Member	Additional Organization	Region	Segment Selection
1.	Kent Kujala	NERC Compliance	RFC	3
2.	Daniel Herring	NERC Training & Standards Development	RFC	4
3.	Mark Stefaniak	Regulated Marketing	RFC	5
4.	Jurgita Albarazi	NERC Compliance	RFC	
5.	Alicia Davey	OPE	RFC	

9.	Group	Dennis Chastain	Tennessee Valley Authority	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	DeWayne Scott		SERC	1
2.	Ian Grant		SERC	3
3.	David Thompson		SERC	5
4.	Marjorie Parsons		SERC	6

10.	Group	Michael Lowman	Duke Energy	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Doug Hils		RFC	1
2.	Lee Schuster		FRCC	3
3.	Dale Goodwine		SERC	5
4.	Greg Cecil		RFC	6

11.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Tim Beyrle	City of New Smyrna Beach	FRCC	4
2.	James Howard	Lakeland Electric	FRCC	3
3.	Greg Woessner	Kissimmee Utility Authority	FRCC	3
4.	Lynne Mila	City of Clewiston	FRCC	3
5.	Cairo Vanegas	Fort Pierce Utility Authority	FRCC	4
6.	Randy Hahn	Ocala Utility Services	FRCC	3
7.	Don Cuevas	Beaches Energy Services	FRCC	1
8.	Stanley Rzad	Keys Energy Services	FRCC	1
9.	Mark Schultz	City of Green Cove Springs	FRCC	3

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
12.	Group	Pamela Hunter	Southern Company: Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing	X		X		X	X				
No Additional Responses													
13.	Group	Jason Marshall	ACES Standards Collaborators						X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Chip Koloini	Golden Spread Electric Cooperative	SPP	5
2.	Mohan Sachdeva	Buckeye Power	RFC	3, 4
3.	Steve McElhaney	SMEPA	SERC	1, 3, 4, 5, 6
4.	Brian Hobbs	Western Farmers Electric Cooperative	SPP	1, 5
5.	Ginger Mercier	Prairie Power	SERC	3
6.	Shari Heino	Brazos Electric Power Cooperative	ERCOT	1, 5
7.	Scott Brame	North Carolina Electric Membership Corporation	SERC	1, 3, 4, 5
8.	Kevin Lyons	Central Iowa Power Cooperative	MRO	
9.	Ellen Watkins	Sunflower Electric Power Corporation	SPP	1
10.	Bob Solomon	Hoosier Energy	RFC	1

14.	Group	Mike O'Neil	Florida Power & Light	X									
No Additional Responses													
15.	Group	Gregory Campoli	ISO/RTO Council Standards Review Committee		X								

	Additional Member	Additional Organization	Region	Segment Selection
1.	Matt Goldberg	ISO-NE	NPCC	2
2.	Ben Li	IESO	NPCC	2
3.	Ali Miremadi	CAISO	WECC	2
4.	Charles Yeung	SPP	SPP	2
5.	Cheryl Moseley	ERCOT	ERCOT	2
6.	Al DiCaprio	PJM	RFC	2
7.	Terry Bilke	MISO	MRO	2

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
16.	Group	Janet Smith	Arizona Public Service Company	X		X		X	X				
No Additional Responses													
17.	Group	Shannon V. Mickens	SPP Standards Review Group		X								

	Additional Member	Additional Organization	Region	Segment Selection
1.	Jonathan Hayes	Southwest Power Pool Inc.	SPP	2
2.	Stephanie Johnson	Westar Energy, Inc.	SPP	1, 3, 5, 6
3.	Scott Jordan	Southwest Power Pool Inc.	SPP	2
4.	Mike Kidwell	Empire District Electric Company	SPP	1, 3, 5
5.	David McRae	Arkansas Electric Cooperative Corporation	SPP	3, 4, 5, 6
6.	Mahmood Safi	Omaha Public Power District	SPP	1, 3, 5
7.	J.Scott Williams	City of Utilities of Springfield	SPP	1, 4

18.	Individual	Greg Froehling	Rayburn Country Electric Cooperative			X							
19.	Individual	Dan Roethemeyer	Dynegy	X				X					
20.	Individual	Kayleigh Wilkerson	Lincoln Electric System	X		X		X	X				
21.	Individual	Jo-Anne Ross	Manitoba Hydro	X		X		X	X				
22.	Individual	David Jendras	Ameren	X		X		X	X				
23.	Individual	Michelle D'Antuono	Ingleside Cogeneration LP					X					
24.	Individual	Mark Wilson	Independent Electricity System Operator		X								
25.	Individual	David Thorne	Pepco Holdings Inc.	X		X							
26.	Individual	Amy Casuscelli	Xcel Energy	X		X		X	X				
27.	Individual	William H. Chambliss	Virginia State Corporation Commission (member, Operating Committee)										
28.	Individual	Brett Holland	Kansas City Power & Light	X		X		X	X				
29.	Individual	Sergio Banuelos	Tri-State Generation and Transmission Association, Inc.	X		X		X					
30.	Individual	Teresa Czyz	Georgia Transmission Corporation	X		X							
31.	Individual	Thomas Foltz	American Electric Power	X		X		X	X				
32.	Individual	Scott McGough	Georgia System Operations Corporation			X							

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
33.	Individual	Andrew Z. Pusztai	American Transmission Company, LLC	X									
34.	Individual	Venona Greaff	Occidental Chemical Corporation							X			
35.	Individual	Chris Scanlon	Exelon	X		X	X	X	X				
36.	Individual	Anthony Jablonski	ReliabilityFirst										X
37.	Individual	Tammy Porter	Oncor Electric Delivery	X									
38.	Individual	Marc Dubord	Hydro Quebec production					X					
39.	Individual	David Kiguel	David Kiguel								X		
40.	Individual	Scott Hoggatt	Wisconsin Electric			X	X	X					
41.	Individual	Mitch Colburn	Idaho Power Company	X									
42.	Individual	Bill Temple	Northeast Utilities	X									
43.	Individual	Dan Inman	Minnkota Power Cooperative	X									
44.	Individual	Spencer Tacke	Modesto Irigation District				X						
45.	Individual	Patrick Farrell	Southern California Edison Company	X		X		X	X				
46.	Individual	Ayesha Sabouba	Hydro One			X							
47.	Individual	Scott Berry	Indiana Municipal Power Agency				X						
48.	Individual	Richard Vine	California ISO		X								
49.	Individual	Chang G. Choi	City of Tacoma - Tacoma Power	X		X	X	X	X				
50.	Individual	D Mason	HHWP	X				X					

If you support the comments submitted by another entity and would like to indicate you agree with their comments, please select "agree" below and enter the entity's name in the comment section (please provide the name of the organization, trade association, group, or committee, rather than the name of the individual submitter).

Summary Consideration:

The SDT thanks all entities for their support of other comments. With respect to Indiana's Municipal Power Agency's comment, all formatting issues have been corrected.

Organization	Agree	Supporting Comments of "Entity Name"
Colorado Springs Utilities	Agree	Southwest Power Pool
Georgia System Operations Corporation	Agree	Georgia Transmission Corporation
Occidental Chemical Corporation	Agree	Ingleside Cogeneration, LP
Hydro Quebec production	Agree	NPCC
Indiana Municipal Power Agency	Agree	Indiana Municipal Power Agency supports the comments submitted by Florida Municipal Power Agency (FMPA). In addition, IMPA believes there is a format issue on FAC-002-2 in the applicability section. Requirement R3 requires the LSE to perform a task but LSE is not listed in the applicability section which is number 4. Instead, LSE is listed as number 5 and is listed after the applicability section, therefore, LSE is not listed in the applicability section.

Organization	Agree	Supporting Comments of "Entity Name"
Minnkota Power Cooperative		MRO's NERC Standards Review Forum (NSRF)

1. **The SDT has proposed the following key revisions to FAC-001-2: • Revised the title and purpose to reflect the language in the requirements. • Removed the reference in R1 to: "…compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements" because it is redundant with FAC-002, R1.2. • Moved all of the subparts in R3, except for R3.1 and R3.2, and to the Guidelines and Technical Basis section. The SDT wants to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as subparts of R3 was deemed too prescriptive, as frequently some items in the list will not apply to all applicable entities – and some applicable entities will have requirements that expand upon the list. The Guidelines should be used as a starting point for each Transmission Owner and applicable Generator Owner to consider in the development of Facility interconnection requirements. • Modified R3 to ensure that the impact on third parties is appropriately addressed. • Retired R4. • Updated all compliance elements: updated the Measures to add examples of acceptable evidence; modified the VSLs for conformance with the updated requirement language; modified the VRFs for conformance with NERC's VRF guidelines; added Time Horizons to each requirement**

Summary Consideration:

Below, the SDT has provided responses to the comments related to FAC-001-2. Where possible, it has grouped similar comments and responded to them together.

Some commenters continue to believe that FAC-001 and FAC-002 are not necessary because their content is covered by FERC tariffs or other regulations. With the support of NERC staff, the SDT stands by its position on the "redundancy" of FAC-001 and FAC-002 with respect to existing FERC regulations. While there might seem to be redundancy from the perspective of entities that already comply with similar regulations, not every entity is subject to these other regulations. Tariffs are transactional in nature; the NERC standards are complementary and cover the same topics from a *reliability* perspective. The standards don't dismiss existing regulations. They acknowledge that those requirements exist, but as previously discussed, the requirement for Open Access Transmission Tariffs (OATTs) varies from region to region and cannot provide the same continent-wide consistency that NERC standards can and must provide. So although Facility connection requirements for public utilities are typically covered in OATTS under Sections 205 and 206 of the Federal Power Act, this leaves out electric utilities such as municipalities, cooperatives, and federal entities (e.g., the Bonneville Power Administration and the Tennessee Valley Authority), which are addressed under Section 215 of the Federal Power Act. OATTs also would not apply to non-jurisdictional entities that fall in NERC's footprint (e.g., Canadian entities). Further, FERC handles market-related documents like tariffs differently from reliability-related documents like standards, and reliability standards should not rely upon market-related documents to address reliability issues. Ultimately, the SDT

agreed that Facility interconnection requirements are necessary for reliability and should continue to be explicitly addressed in NERC standards.

Some commenters disagreed with the SDT's logic for using "Facilities" rather than "entities" in the Purpose. The SDT changed "Facilities" to "entities" per stakeholder comments that "Facilities" do not seek interconnection. While the SDT originally used "Facilities" for interconnections that involve non-NERC entities, in keeping with the logic of the Project 2010-07 – Generator Requirements at the Transmission Interface drafting team, it believes that the undefined term "entities" is broad enough to account for a variety of interconnections.

Some commenters suggested that "to conduct a study on" be changed back to "evaluate" in the Applicability section. The SDT continues to prefer "to conduct a study" to "evaluate" in part because it is narrower; the Project 2010-07 – Generator Requirements at the Transmission Interface drafting team intended for the trigger for FAC-001's application to Generator Owners to be as specific as possible, and the trigger of an Agreement *to conduct a study* is more specific. This language does not preclude a Generator Owner from including other items in its Agreement, nor does it prevent the Generator Owner from conducting higher level evaluations before it determines to enter into an Agreement to conduct a study.

Some commenters suggested language changes to the Purpose section that are no longer applicable because, in response to other comments, the SDT is changing "Facilities" to "entities."

Some commenters suggested capitalizing "Applicable Generator Owner" throughout the standard. The SDT does not believe it is necessary to capitalize "Applicable," as the meaning of "applicable Generator Owner" is made clear in the Applicability section, and "Applicable Generator Owner" is not a NERC-defined glossary term.

Some commenters were confused about the reference to the reliability principles in the Background section of FAC-001 and FAC-002. Because many commenters were confused about the reference to the reliability principles (which are referenced in the NERC Standard Processes Manual and posted as a resource document on NERC's Standards Resources page), the drafting team has deleted that sentence from the Background section. Without the section about the reliability principles, the Background too similar to the Purpose to add value, so the Background has been deleted.

Some commenters encouraged the SDT to modify the "make available upon request language" language, such as by adding a time frame or changing it to "make available upon *written* request." The SDT does not believe it is necessary to add specificity to "make them available upon request." That phrase replaces "publish," and was added to account for entities that do not wish to post their Facility interconnection requirements on a public website; the SDT understands that most entities do make their interconnection requirements public. The SDT intends for the provision of the requirements to be relatively immediate. **One commenter suggested a language change to acknowledge that an**

interconnecting entity might not know to request interconnection requirements. If an entity is seeking to interconnect to a Transmission Owner or applicable Generator Owner, that entity will have to communicate with that Transmission Owner or applicable Generator Owner, and the Transmission Owner or applicable Generator Owner would logically communicate about the existence of interconnection requirements in the case that the entity seeking to interconnect did not know that they existed.

Some commenters encouraged adding requirements for end-user Facilities, similar to the requirements for Generator Owners. End-user Facilities are included in the standard because Transmission Owners have an obligation to develop Facility interconnection requirements for this type of interconnection. The end-user Facilities have no obligation under the standard and thus do not need to be added to the Applicability section, nor do they need to be added to R3. The SDT is confident that if a Distribution Provider or Load-Serving Entity received an interconnection request at the Bulk Electric System Level, then it is likely that the Distribution Provider or Load-Serving Entity is already registered as a Generator Owner or Transmission Owner, and thus FAC-001 and FAC-002 would apply. However, it is more likely that if a Facility is interconnecting to a Distribution Provider or a Load-Serving Entity, the interconnection will not implicate the Bulk Electric System and thus this standard need not address it.

Some commenters suggested removing "fully" from R2. "Full" execution of an agreement makes clear that all parties involved have signed off on the specific Agreement in question. The SDT has left the R2 language as is, and has updated the Applicability section to state "fully executed" for consistency.

Some commenters recommended clarifying the "days" in R2. The SDT intended for "45 days" to mean 45 calendar days (as indicated by the use of "calendar days" in the corresponding VSLs) and has modified the standard accordingly.

Some commenters suggested more clearly defining the term "applicable Generator Owner." "Applicable Generator Owner" is not a defined term, but rather a subset of Generator Owners carved out so that FAC-001-2 applies to them in specific instances. They are simply Generator Owners that have received a request to interconnect to their Facility(ies), not necessarily Generator Owners that have been deemed "Transmission Elements."

Some commenters did not agree with the use of "materially modified" in R3, and/or questioned what it means. Part 3.2 (then R3.1.2) already references "modified Facilities" in the currently enforceable version of FAC-001. The SDT added "materially" in response to stakeholder concern that "modified" was not clear. The SDT provided additional information in the Guidelines section to explain that the definition of "material" can be up to engineering judgment: *Entities should have documentation to supports the technical rationale for determining whether an existing interconnection was "materially modified." Recognizing that what constitutes a "material modification" will vary from entity to entity, the intent is for this determination to be based on engineering judgment.* The SDT added "materially modified" to Part 3.1 for

consistency. The expression could mean the partial or complete retirement of any generation, transmission, or distribution interconnection Facilities taking place outside the usual planning process (if a Transmission Owner deemed those changes to constitute material modifications).

Some commenters preferred "interconnected transmission system(s)" to "affected system(s)." The SDT chose to use "affected" instead of "interconnected" because an interconnection could impact other systems that may not be physically interconnected to the system in question. The SDT chose to eliminate "transmission" because the studies should consider the impact on more than just the transmission system – impacts could include impacts on the electric system more generally.

Some commenters expressed concern about the roles of the Transmission Owner, Transmission Planner, and Planning Coordinator, especially when these three are not the same entity. The Transmission Owner has to address the procedures for coordinated studies in FAC-001, R3, but the onus is on the Transmission Planner and Planning Coordinator in FAC-002 to actually conduct those studies, which includes studying the impact on affected system(s) in FAC-002, R1, Part 1.1, along with a requirement that the study results be evaluated and coordinated by all entities involved (which would include the Transmission Owner) in FAC-002, R1, Part 1.4. The Transmission Owner must include these procedures in its Facility interconnection requirements so that the interconnecting entity is aware of the steps required before interconnection. While there is no explicit requirement that the Transmission Owner develop its procedures for coordinated studies in conjunction with the Transmission Planner and Planning Coordinator, the SDT does not know what other procedures would be documented if not those directed by the Transmission Planner or Planning Coordinator (in cases where these entities are not the same as the Transmission Owner).

Some commenters noted that a Transmission Owner or applicable Generator Owner cannot compel other entities to comply with all applicable NERC Reliability Standards. The SDT agrees that a Transmission Owner or applicable Generator Owner cannot compel another entity to comply with NERC's standards and that they can only give the other entities a list of Facility interconnection requirements that will ensure reliability once the interconnection is made. Thus, upon further review, the last sentence of the Guidelines and Technical Basis section has been deleted, as it was determined to be meaningless.

One commenter suggested that the Purpose statement be modified to reference the BES. While all NERC standards only apply to the BES unless otherwise noted, the SDT agrees that a reference to BES should be added to the FAC-001 Purpose statement for consistency with FAC-002.

One commenter suggested changing the reference to "connection" in the Purpose to "interconnection," for consistency. The SDT agrees and made the change.

One commenter noted that capitalizing "Interconnection" in the title and using "interconnection" throughout the standard is confusing because "Interconnection" is a different NERC-defined term. The SDT notes "Interconnection" is only capitalized in the title of the standard. When "interconnection" is used as a lowercase term without reference to one of the four major Interconnections, the SDT believes it is clear that the reference has nothing to do with the NERC Glossary term "Interconnection."

One commenter suggested that the Purpose be modified to reference reliability and to broaden the Purpose to account for possible requirements related to paying for studies, advance funding, etc. The SDT has revised the Purpose statement to reference reliability, but has not extended the scope of the standard to address funding responsibilities.

One commenter recommended carving out a subset of small non-jurisdictional Transmission Owners in the Applicability section in the same way that the SDT carved out a subset of applicable Generator Owners. The drafting team does not believe this is appropriate. Whether a tariff applies to a Transmission Owner does not impact whether it should be included under this standard, and unless NERC's Risk-Based Registration efforts conclude that subsets of smaller Transmission Owners should be eliminated from standards like this one, the SDT believes that it is appropriate to apply FAC-001 and FAC-002 to all Transmission Owners.

One commenter suggested combining FAC-001 and FAC-002. The SDT continues to believe that it makes more sense to keep the standards separate, as the entities to which each standard is applicable are different. Combining them could lead to confusion.

One commenter expressed concern about how privately or cooperative-owned transmission lines are to be addressed in FAC-002. All entities, whether OATT or non-OATT, would be treated the same under Section 215, and the SDT believes this is a misunderstanding of the FERC regulations.

One commenter suggested that FAC-001 address specialized requirements resulting from BES Inclusion I4. The SDT notes that entities that need to specially account for dispersed power producing resources should address them in their interconnection requirements. NERC requirements are to be neutral with respect to technology.

One commenter suggested revising the Purpose to specifically reference materially modified Facilities. While the SDT agrees that it's important for FAC-001 and FAC-002 to address materially modified existing interconnections, the SDT believes that the purpose statement is broad enough to account for both new and modified Facilities, as further specified in the actual requirements.

One commenter suggested modifying the Applicability section to make the description of an "applicable Generator Owner" part of the main description of Generator Owner. The SDT thinks this suggested change is a matter of preference but has the same impact as the current language, so it has elected to leave the language as is.

One commenter suggested adding Planning Coordinator and Transmission Planner to the Applicability section of FAC-001. The responsibility for documenting Facility interconnection requirements lies with the owner of the Facilities accepting an interconnection, specifically in cases where the Transmission Owner may not be the same entity as the Planning Coordinator or Transmission Planner.

One commenter suggested adding Distribution Providers to the Applicability section of the standard to encompass requirements for end-user Facilities. End-user Facilities are included in the standard because Transmission Owners have an obligation to develop Facility interconnection requirements for this type of interconnection. The end-user Facilities have no obligation under the standard and thus do not need to be added to the Applicability section.

One commenter suggested deleting some multiple references of "interconnection requirements" and "Facilities" in FAC-001-, R1. The SDT discussed this comment but thinks that the second sentence is clearer as written.

One commenter asked to whom the TO and GO are supposed to make their Facility interconnection requirements available. The SDT intends for the Transmission Owner and applicable Generator Owner to provide the Facility interconnection requirements to any party that requests them. The standard originally required that interconnection requirements be published, and the SDT modified the standard to incorporate the entities that may not wish to publish their interconnection requirements in the absence of a request (though the SDT understands that most Facility interconnection requirements are made public anyway).

One commenter stated that the requirement to "update as needed" is non-substantive and is captured in the requirement to document interconnection requirements. The SDT does not believe that updating is inherently captured in "documenting." Without the requirement to update as needed, a Transmission Owner could document its Facility interconnection requirements and never touch them again, ignoring changes that might impact the interconnection requirements.

One commenter suggested that a reference to "materially modified Facilities" be incorporated into the requirements for applicable Generator Owners. A Generator Owner would not ever have to determine whether modification to an existing interconnected Facility counts as a "material modification." If a Generator Owner interconnects a Facility (after complying with R2), it needs to register as a Transmission Owner and is then subject to R1. The SDT has developed an R4 that applies specifically to applicable Generator Owners to make this distinction clear.

One commenter asked for clarification that end-user Facilities includes large wholesale customer interconnections as well as Distribution Provider system interconnections. "End-user Facilities" is intended to account for any Facilities that do not qualify as transmission Facilities or generation Facilities under R1, Part 1.1 or 1.2.

One commenter stated that "coordinated" in R3 is ambiguous. The requirement used to say "jointly coordinated studies" and while the SDT believed that "jointly" and "coordinated" were redundant, it does not believe that "coordinated" is ambiguous. "Coordinated" studies would simply be studies that were reviewed by all parties involved; the level of participation could vary. Evidence could be email or call logs indicating that all parties were contacted and aware that the studies were being conducted.

One commenter suggested keeping five of the former sub-parts of R3 in the requirement. The SDT believes that all Parts except the original R3.1.1 and R3.1.2 are too prescriptive to include in a standard. Some of the original Parts in R3 are relevant for certain entities but not others, and to select any subgroup of the original Parts and eliminate others presumes a one-size-fits-all approach that is not appropriate for this standard. Facility interconnection requirements are inherently inconsistent, and the proposed FAC-001-2 acknowledges that, while offering guidance (in the Guidelines and Technical Basis section) on the elements that should be considered for inclusion in Facility interconnection requirements.

One commenter suggested specific rewording R3, Parts 3.1 and 3.2 to "Procedures for coordinating studies with affected entities of the impact of new or materially modified Facilities" and "Procedures for notifying those responsible for the reliability of affected system(s) of the impact of new or materially modified Facilities." The SDT believes that the change to 3.1 would change the meaning of Part 3.1 and has not adopted the suggested change. The SDT believes that the proposed clarification for 3.2 makes Part 3.2 clearer while maintaining the original intent, and has made the change.

One commenter noted that in R3, Part 3.2, "those responsible for the reliability of the interconnected affected Transmission system(s)" is vague. The language is purposefully broad to account for the fact that the NERC Registered Entity responsible for the reliability of the affected system(s) will vary from interconnection to interconnection.

One commenter pointed out that all reference to subparts should be references to "Parts." The SDT agrees and has modified the standard accordingly.

One commenter encouraged the team to add a specific reference to "Parts 3.1 to 3.2" to M3. The SDT believes that "all requirements" in Requirement R3 necessarily includes the Parts of R3.

One commenter suggested changes to the Time Horizons based on the definitions in the NERC Glossary. The Time Horizons incorporated into the standard refer to Time Horizons in the compliance realm, as defined in this document: http://www.nerc.com/pa/Stand/Resources/Documents/Time_Horizons.pdf. In the compliance realm, a Long-term Planning Time Horizon is a planning horizon of one year or longer.

One commenter suggested that three years for data retention is too long. The SDT notes that the data retention period should be at least the length of the audit cycle, which is three years for most entities.

One commenter suggested modifying the Guidelines and Technical Basis section to require the Transmission Owner, Transmission Planner, or Planning Coordinator to specify guidance on what constitutes a "material modification." The SDT is providing guidance that there should be some documented engineering basis for considering a modification "material." If a Transmission Owner wishes to determine the materiality of a modification using specification from its Transmission Planner or Planning Coordinator, it is not precluded from doing so.

Organization	Yes or No	Question 1 Comment
Dominion	No	While Dominion agrees with the revisions from a technical perspective, Dominion has the following suggestions which Dominion believe will improve clarity and increase consistency. • Given the SDT changed the title to use the word "Interconnection" instead of "Connection", Dominion suggest the Purpose be modified similarly. Adoption of this suggestion will also improve consistency with Requirement 1. • In Applicability Section 4.1.2.1; suggest removing the 'to' in 'conduct a study to' • Requirement R2 - Suggest deleting "full" in the first sentence to be consistent with Applicability Section 4.1.2.1. • Requirement R3.1 and R3.2 - Dominion does not agree with inclusion of the phrase "materially modified" in this standard. In our view a modification (whether material or not) can only occur on an existing facility. According to the SAR, this standard is meant to apply to a new (maybe proposed would be a better word) that might become interconnected (if ultimately constructed). Dominion suggests removing the last sentence from the Application Guidelines section of the document. It is Dominion's position that the Transmission Owner and applicable Generator Owner only needs to considered the items above this sentence in the development of

Organization	Yes or No	Question 1 Comment
		Facility interconnection requirements. It is the obligation of the owner and operator of the interconnecting Facility to comply with all applicable NERC Reliability Standards.
Northeast Power Coordinating Council	No	The title of FAC-001-2 should remain Facility Connection Requirements. Using Interconnection can be confusing because Interconnection is a defined term in the NERC Glossary, and not intended for use in the standard. • Requirement R2 - Suggest deleting “full” in the first sentence to be consistent with Applicability 4.1.2.1. • Parts 3.1 and 3.2 - The inclusion of the phrase “materially modified” should not be used in this standard. A modification (whether material or not) can only occur on an existing facility. According to the SAR, this standard is meant to apply to a new facility that might become interconnected (if ultimately constructed). Suggest keeping the wording “...interconnected transmission system(s)” instead of replacing with “...affected system(s)”. • The last sentence from the Application Guidelines section of the document should be removed. The Transmission Owner and applicable Generator Owner only need to consider the items preceding the last sentence in the development of Facility interconnection requirements. It is the obligation of the owner and operator of the interconnecting Facility to comply with all applicable NERC Reliability Standards. Revise Applicability 4.1.2.1 (remove “to on”) to read :4.1.2.1 Generator Owner with an executed Agreement to conduct a study to determine the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the interconnected Transmission System. Because “Facilities” cannot seek interconnect, suggest revising the Purpose to read:” ...available so that entities

Organization	Yes or No	Question 1 Comment
		seeking interconnection of their Facilities will have the..."Revise the second sentence of Requirement R1 to read:" Each Transmission Owner's Facility interconnection requirements shall address:" "Interconnection requirements" are stipulated in the first sentence of R1.Remove the word "Facilities" from Parts 1.1, 1.2, and 1.3. R1 stipulates Facilities and the word does not need to be repeated. Suggest revising R2 to read "Each applicable Generator Owner shall, within 45 days of execution of an Agreement to determine the reliability impact of..." "Full" is not needed, and using "determine" is clearer than "conduct a study on". Suggest revising Part 3.1 to read: "Procedures for conducting coordinated studies of new Facilities and their impacts on the interconnected systems." "Materially modified" should not be used. Suggest revising Part 3.2 to read: "Procedures for the notification to those entities responsible for the reliability of the interconnected system of the reliability impact of new Facilities on those interconnected systems."
NCPA Generation	No	The Purpose is narrowed and more focused. Although emphasis is placed on conducting the necessary studies to assess the impacts as the requirement, additional requirements may include paying for the studies, advance funding, ensuring availability of additional funding and resources, need for an advance notice to minimize business interruption, etc. With this purpose in mind, the purpose in version2 is not clear. Perhaps more clarified statement of the Purpose may be :To ensure continuing reliability of the interconnection, transmission systems owned by Transmission Owners and/or Generator Owners, Generator Operators shall document and make available the detailed requirements to a third party seeking permission to connect, increase or otherwise alter the impact to their systems. The definition of Applicable Generator Owner - AGO (4.2) is narrowed compared to the version 1. Under version 1, the GO became the AGO when the GO had an executed agreement from an entity seeking

Organization	Yes or No	Question 1 Comment
		permission to connect to the GO's existing facility. Version2 definition is narrowed down to having an executed agreement to conduct reliability impact study only. It is not explicitly stated that the Applicable GO will imitate the study with the PC or TP to perform the study. Is the Applicable GO also responsible for entering into an agreement with the TP or PC to actually perform the study in addition to documenting the Facility interconnection requirements and to make them available? This is not addressed in the standard and causes confusion. It is not clear why the SDT singled out the study and left out other elements that may be identified in the GO's Interconnection Agreement that the entity may be required to execute. Within these requirements, study should be a major element but not the only as described above in the Comments section of Purpose above. In Section 5 Background the objective of FAC-001 is narrated. SDT's selection of the phrase 'Facilities seeking interconnection' by the SDT, instead of "entities" is explained. With that in mind and maintaining the title "Facilities seeking interconnection", 4.1.2.1 may be better clarified as follows: Sub-Section 4.1.2.1: Applicable Generator Owner is the Generator Owner who has received an executed an agreement to study reliability impact on its transmission system from third party Facilities seeking interconnection to the Generator Owner's transmission system.
MRO NERC Standards Review Forum	No	Section 4.1.2.1: The word "to" in "Generator Owner with an executed Agreement to conduct a study to on the ... " should be removed. Section 4.1.2.1: By removing the word "evaluate" and replace it with "... to conduct a study on the reliability impact..." removes the TO's ability to evaluate and reason if study analysis is needed. This wording changes the meaning to every application would need to be studied.R1.1.3: End-user facilities are included in Requirement 1 to have Facility interconnection requirements available - but there is not a requirement dealing with End Use Facilities like there is with Generation Facilities (R1.1.1) and Transmission Facilities (R1.1.2).R2: Again "evaluate" was removed and replaced with "...conduct a

Organization	Yes or No	Question 1 Comment
		study...". This forces the TO to complete a study for each new or modified interconnection - removes the ability for the TO use reason and judgment as to the impact.
Florida Municipal Power Agency	No	The scope of this standard could be significantly narrowed or even totally eliminated. FAC 001-2 essentially remains as an administrative standard that is not a results-based standard, i.e., it requires entities to have criteria, but does not specify that criteria, making it administrative in nature. Additionally, FAC 001-2 applicability to new generator interconnections is redundant to existing FERC regulations such as the LGIA and LGIP. New end user interconnections to the transmission system may be a jurisdictional issue with state regulators and is certainly already addressed by various retail tariff or market rules. What is not necessarily covered by existing regulations are new transmission interconnections (e.g., merchant) but will in part be addressed by Order 1000, and such criteria is certainly addressed in interconnection agreements. A policy issue that must be evaluated for this and other NERC reliability standards is the overarching approach that NERC is taking with regards to existing regulations. Note that the language provided in the Consideration of Issues and Directive paper (Page 3) completely dismisses existing regulations. The SDT points out that regardless of what is covered in a tariff, requirements for interconnecting new Facilities still need to be addressed in NERC's Reliability Standards. The requirement for Open Access Transmission Tariffs varies from region to region. FERC handles market-related documents like tariffs differently from reliability-related documents like standards, and reliability standards should not rely upon market-related documents to address reliability issues.(emphasis added)And additionally, from page 6 of the same NERC document, in response to Paragraph 81 recommendations to eliminate R1 and R2, "Reciprocity" requirements are not recognized or given any consideration: Although Facility connection requirements for public utilities are typically covered in Open Access Transmission Tariffs (OATTs) under

Organization	Yes or No	Question 1 Comment
		Sections 205 and 206 of the Federal Power Act, this leaves out electric utilities such as municipalities, cooperatives, and federal entities (e.g., the Bonneville Power Administration and the Tennessee Valley Authority), which are addressed under Section 215 of the Federal Power Act. OATTs also would not apply to non-jurisdictional entities that fall in NERC's footprint (e.g., Canadian entities). Ultimately, the SDT agreed that Facility interconnection requirements are necessary for reliability and should continue to be explicitly addressed in NERC standards. These generic policy matters must be addressed; otherwise, the body of NERC standards will continue to grow exponentially with redundant administrative requirements which are not results-based. A discussion could begin with the Standards Committee regarding whether existing regulations can be completely dismissed when developing reliability standards. This generic guidance will be helpful on many fronts. If the SDT does not agree that FAC-001 can be retired, as recommended by the P81 effort, then TOs ought to be treated as GOs are; that is, most TOs will have the necessary requirements documented as part of their tariffs, including large Section 205 non-jurisdictional entities. The entities that may not are those that do not have tariffs because they are small non-jurisdictional entities where interconnection requests will be very infrequent, similar to interconnection requests to GOs. As such, if the choice is to not retire P81, then all applicable entities ought to only have to produce interconnection criteria in accordance with this standard if the entity receives such a request.
ACES Standards Collaborators	No	(1) We disagree with the need for this standard. First, virtually every Transmission Owner of a BES Element is covered under a FERC approved tariff in the United States either under an approved regional tariff such an ISO/RTO tariff or under their own tariff. Even transmission owners whose transmission rates are not regulated by FERC have FERC approved tariffs as a result of the reciprocity requirements in the FERC pro forma tariff. These tariffs require interconnection processes, facility studies and facility

Organization	Yes or No	Question 1 Comment
		connection analysis that are more rigorous than this NERC standard. This would mean this entire standard meets paragraph 81 criterion B7 in that is redundant with another regulation and is, thus, unnecessary. This criterion is very clear that "in the case of redundancy, the task or activity itself may contribute to a reliable BES, but it is not necessary to have two duplicative requirements on the same or similar task or activity. Such requirements can be removed with little or no effect on reliability and removal will result in an increase in efficiency of the ERO compliance program." Second, the purpose statement of standard is even clear that the standard is written for commercial business practice purposes. It states "so that Facilities seeking interconnection will have the information necessary for considering and pursuing that interconnection." How does adding another End-User Facility support the reliability operation of the BES? It does not support BES reliability, but rather supports the local End-User facility owner's reliability which is necessary and laudable but is not covered under the statutory authority of the Energy Policy Act of 2005 which is to promote reliable operation of the Bulk Power System (BPS). (2) For R1 and R2, to whom exactly is the TO and GO supposed to make their Facility interconnection requirements available? As the requirement is written, it is open ended which means that the TO and GO would literally have to supply their Facility interconnection requirements to any party that requests them. We suggest limiting the entities to whom the TO must supply the Facility interconnection requirements to only those seeking to interconnect. (3) Part 3.1 requires procedures for coordinated studies of new or materially modified Facilities. This Part appears to be inconsistent with proposed FAC-002 which correctly requires the PC or TP to perform the Facility interconnection studies. Why would the TO need procedures for

Organization	Yes or No	Question 1 Comment
		coordinated studies if they don't perform the studies? Please refine this part to further clarify what is actually required of the TO. (4) In Part 3.2, why was Transmission dropped as an adjective of system? Standards apply to the Bulk Electric System which could be thought of as the Transmission system. Thus, striking "Transmission" would imply that the purpose is to expand the requirement application beyond the Transmission system and, thus, beyond the Bulk Electric System (BES). Furthermore, "System" is defined term in the NERC Glossary that includes generation, transmission and distribution. While we understand that the term was not capitalized, thus, meaning the NERC definition does not apply, this causes further confusion because many readers will assume the non-capitalization is a mistake. Furthermore, the question becomes what definition is intended to apply if the NERC definition does not apply. For consistency, we suggest that BES would be the more correct term and cause less ambiguity. We suggest changing "system" to BES. (5) A data retention period of three years is excessive for a standard that requires Facility interconnection requirement (i.e. essentially a document). We suggest a data retention period of no longer than one year and possibly to simply retain the most recent Facility interconnection requirements documents.
ISO/RTO Council Standards Review Committee	No	All three requirements R1, R2 and R3 lists the Time Horizon to be Long-term Planning. In many ISOs and RTOs, proposed Interconnections can fall under either Near-term Planning or Long-term-Planning. The NERC Glossary defines Long-term as 6 to 10 years out and beyond, and Near-term as 1 to 5 years out. Some ISOs' interconnection studies use base cases that are 5-years out. We would suggest that the Time Horizon in FAC-001-2 to include Near-term Planning as well.

Organization	Yes or No	Question 1 Comment
Rayburn Country Electric Cooperative	No	Actually Yes and No, I think the changes are moving in a positive direction however I am a proponent of combining the standards into one Facility Interconnection standard. Since they do interact I think it would be a move for efficiency. Also review the, Purpose: To ensure that Transmission Owners and applicable Generator Owners document and make Facility connection requirements available so that Facilities seeking interconnection will have the information necessary for considering and pursuing that interconnection Change the term Facilities to facilities to capture potential non BES interconnections. For SDT consideration: How are privately or cooperative owned (non-OATT) transmission lines addressed when the only interconnections that will allowed are those of the current owner? Is this a special case that can be addressed in the Guidelines and Technical Basis?" for future compliance reference.
Manitoba Hydro	No	On page 5, there is both a stated Purpose and Background. The first refers to documenting and making "Facility connection requirements available ...." The second refers to documenting "Facility interconnection requirements". For consistency, both words should be the same. FAC-001-2 should address any specialized requirements resulting from the inclusion of dispersed power producing resources in the latest definition of BES (Inclusion I4). For example, areas such as aggregated modeling or specialized reactive power requirements or overfrequency ride through requirements, for example, should be considered for documentation if there are different requirements for traditional synchronous generators vs dispersed generation like wind and solar. The SDT has included the following requirement in the Guideline and Technical Basis, "The Transmission Owner's or applicable Generator Owner's Facility interconnection requirements should ensure that by the time of interconnection, the interconnecting Facility will be able to comply with all applicable NERC Reliability Standards." If this is a true requirement it should be moved into the standard with an associated measure.

Organization	Yes or No	Question 1 Comment
Ameren	No	(1) In order to be consistent with the Draft FAC-002-2, FAC-002-1 should include the PC and TP as Functional Entities. (2) We request requirement R1.1 be reworded to read: "1.1 New and materially modified generation Facilities." Realize that the GO is not allowed to have the "wide area view" of the interconnected transmission system the GO is therefore unable to determine whether any potential new generation, or modified existing generation Facilities, will have an impact on the BES. Therefore, we believe that the TO (who does have the wide area view of the interconnected transmission system), or the appropriate TP or PC, must provide the GO with technical guidance on what constitutes new generation or materially modified generation. In fact, this is the only way an existing GO can comply with R3.1 and R3.2 for a third party GO that requests an interconnection. (3) We request the first paragraph of the Guidelines and Technical Basis section be changed to recognize the need for the TO, TP or PC to specify technical guidance on what constitutes a "material modification" to an existing generation Facility. (4) Finally, we request the last paragraph of the Guidelines and Technical Basis section be reworded as follows: "The Transmission Owner's or applicable Generator Owner's Facility interconnection requirements should contain sufficient guidance, as necessary, so the interconnecting generation Facility will be able to comply with all applicable NERC Reliability Standards." The current draft wording seems to imply a liability that the applicable GO must ensure that the new third party interconnection facilities will comply with all applicable NERC Standards.
American Electric Power	No	Regarding the references to facilities which are "materially modified", and the documentation needed to support one's technical rationale - would such references be pre-written and establish how, in general, they are to be

Organization	Yes or No	Question 1 Comment
		applied in future decision making? Or instead, would this documentation be written on a case-by-case basis for providing justification on the decision that was made in each specific instance? Please provide clarification.
American Transmission Company, LLC	No	ATC requests that the SDT consider the following recommendations to improve and clarify the Standard. a. Section 4.1.2.1: Please delete the second "to" in "Generator Owner with an executed Agreement to conduct a study to (DELETE) on the ... ". It did not read properly. b. Section 4.1.2.1: Please reconsider leaving the term "evaluate" in this section since replacing it with "... to conduct a study on the reliability impact..." removes the Generator Owners (GO's) ability to evaluate and determine if a study analysis is needed. The revised wording changes the intent such that every application would need to be studied. c. Sub-requirement R1.1.3 includes End-user facilities" however, there is no requirement dealing with End Use Facilities within the Standard like there is with Generation Facilities (R1.1.1) and Transmission Facilities (R1.1.2). To address this omission, ATC recommends that Requirement R3 be revised as follows: "Each Transmission Owner and each applicable Generator Owner and Distribution Provider shall address ....." d. Section 4.1 (Applicability): Please add Section "4.1.3. Distribution Provider" since they would encompass the requirements for "End User Facilities". e. Requirement R2: Please reconsider leaving the term "evaluate" in this section since replacing it with "... to conduct a study on the reliability impact..." removes the Generator Owners (GO's) ability to evaluate and determine if a study analysis is needed. The revised wording changes the

Organization	Yes or No	Question 1 Comment
		intent such that every application would need to be studied, even when study is unnecessary.
ReliabilityFirst	No	ReliabilityFirst Abstains and offers the following comments for consideration: 1. Applicability Section 4.1.2.1 - ReliabilityFirst notes there is an inadvertent word “to” in between the words “study” and “on”. ReliabilityFirst recommends the following for consideration: “Generator Owner with an executed Agreement to conduct a study on the reliability impact...” 2. Background Section - Within the Background section, there is reference to “objective supports reliability principle 3”. For those stakeholders who are unaware of the NERC Reliability Principles, ReliabilityFirst recommends adding a footnote to this language referencing either reliability principle 3 or a link to the NERC Reliability Principles document. 3. Requirement R1 - ReliabilityFirst recommends removing the following language, “update them as needed”, because it is non-substantive. With the Transmission Owner documenting their Facility interconnection requirements, they are inherently updating them as well. 4. Requirement R1 - ReliabilityFirst recommends including a timeframe in which the Transmission Owner needs to make the Facility interconnection requirements available following a request. ReliabilityFirst recommends the following for consideration: “Each Transmission Owner shall document Facility interconnection requirements and make them available [within 30 calendar days] upon request.” 5. Requirement R2 - ReliabilityFirst recommends clarifying the term “days” (i.e., is it calendar or business days?): “Each applicable Generator Owner shall, within 45 [calendar] days...”

Organization	Yes or No	Question 1 Comment
		6. Requirement R2 - ReliabilityFirst recommends including a timeframe in which the Generator Owner needs to document Facility interconnection requirements and make them available following a request. ReliabilityFirst recommends the following for consideration: "... document Facility interconnection requirements and make them available [within 30 calendar days] upon request. 7. Requirement R3 Parts 3.1 and 3.2 - ReliabilityFirst believes the terms "coordinated" and "materially" are ambiguous and open the requirement up to unnecessary interpretation. Without further clarity, these terms may lead to unintended compliance complications. ReliabilityFirst recommends removing these terms from Requirement R3, Part 3.1 and 3.2. 8. Requirement R3 - ReliabilityFirst believes several of the removed (i.e., prescriptive) sub-parts listed in the currently enforceable FAC-001-1Requirement R3 should remain in the requirement. ReliabilityFirst believes that the following five items apply to all applicable entities and should be required to be included within the Transmission Owners and Generator Owners Facility interconnection requirements. The remaining deleted sub-parts can be referenced in the Guidelines and Technical Basis section. The five sub-parts that ReliabilityFirst believes should be reinserted within Requirement R3 include: a. 3.1.3. Voltage level and MW and MVAR capacity or demand at point of connection. b. 3.1.5. System protection and coordination. c. 3.1.9. Voltage, Reactive Power, and power factor control. d. 3.1.11. Equipment Ratings. e. 3.1.16. Communications and procedures during normal and emergency operating conditions.

Organization	Yes or No	Question 1 Comment
Minnkota Power Cooperative	No	Please clarify the scope of the requirements. It should be limited to interconnections to the BES, correct? According to the Background information on page 5 of 15, under "5. Background", the objective supports reliability principle 3, which refers to the “bulk power systems.”R3.1 Clarify the meaning of the expression, “materially modified”. The expression can be interpreted to include the partial or complete retirement of any generation, transmission, or distribution interconnection facilities. R3.2: "those responsible for the reliability of the interconnected affected Transmission system(s)" is vague, is this the intent of the SDT? Should this be more prescriptive and identify the appropriate NERC Registered Function, such as Reliability Coordinator?
Southern California Edison Company	No	The Planning Coordinator is the only appropriate entity for coordination of affected system impacts. As R3.1 is currently written, the Transmission Owner is responsible for developing procedures, which would only work well if the TO is also its own PC and BA. In the case where a TO is not a BA or PC, as is found in an ISO or RTO framework, the responsibility for coordinating impacts to affected systems falls on the ISO or RTO. As written, R3.1 creates a disconnect between the compliance responsibility to coordinate affected system impacts and the ISO’s tariff obligation. Essentially, the compliance burden of an ISO function is being placed on a TO in a case where the two functional entities are not the same. SCE believes that coordinating impacts to affected systems more appropriately belongs in FAC-002-2 - Facility Interconnection Studies and should be assigned to the Planning Coordinator. This approach will work within an ISO/RTO framework, as well as in cases where the TO is also the PC. SCE proposes removing “and their impacts to affected systems” from R3.1 and completely removing R3.2. FAC-002-2 should include a new requirement (R5) to identify the Planning Coordinator’s responsibility to coordinate the impact to affected systems.

Organization	Yes or No	Question 1 Comment
PacifiCorp	Yes	Possible typos: FAC-001-2 Redline draft -- "connection requirements" should be "interconnection requirements" in the Purpose section.FAC-001-2 Redline draft in section 4.1.2.1 -- Remove the "to" in the first sentence: "...conduct a study to on the reliability...."
FirstEnergy	Yes	
Tennessee Valley Authority	Yes	We suggest the purpose statement be further modified to read as follows: "To ensure that Transmission Owners and applicable Generator Owners document and make their Facility interconnection requirements available so that entities seeking to establish or materially modify a Facility interconnection will have the information necessary to pursue it". We disagree with the drafting team's logic for using "Facilities" rather than "entities" in describing the party seeking to interconnect (used in section A.3 and A.5). The section A.4, 4.1.2.1 edit should be either "…conduct a study to evaluate the reliability impact..." or " conduct a study on the reliability impact...". For requirement R1, making Facility interconnection requirements "available upon request" invokes a degree of responsibility on the entity seeking to interconnect to know that the Transmission Owner has such requirements, and to ask for them. The drafting team should consider replacing "and make them available upon request" with "and provide them to an entity seeking to interconnect". We believe the proposed revision may lack clarity in instances where the Transmission Owner, Transmission Planner and Planning Coordinator are not the same entity. For example, requirement R3 requires the Transmission Owner to address procedures for coordinated studies, presumably to be performed by the Transmission Planner and Planning Coordinator as outlined in FAC-002. There is no requirement for the Transmission Owner to develop its procedures for

Organization	Yes or No	Question 1 Comment
		coordinated studies in conjunction with the Transmission Planner and Planning Coordinator who will be performing those studies.
Duke Energy	Yes	Duke Energy suggests a rewording of Section 4.1.2.1 of the Applicability Section due to an apparent typographical error as follows:"4.1.2.1 Generator Owner with an executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems."
Southern Company: Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing	Yes	FAC-001 should reference the Bulk Electric System in the Purpose as FAC-002 does. To ensure that Transmission Owners and applicable Generator Owners document and make Facility connection requirements available so that Facilities seeking interconnection to the Bulk Electric System will have the information necessary for considering and pursuing that interconnection.
Florida Power & Light	Yes	The revised requirements will necessitate some revisions to FPL's Facility Connection Requirements document (as an example, changing connection requirements to interconnection requirements where appropriate) however the changes are easily manageable within the proposed implementation plan timeframe.
Arizona Public Service Company	Yes	
SPP Standards Review Group	Yes	While we generally agree with the proposed revisions, we have the following recommendations for the SDT to consider. Delete the 'to' at the end of the first line of Applicability section 4.1.2.1.The Rationale box for Requirement R3 contains a reference to subparts of R3. Other recently approved standards, most notably CIP-014-1 referred to subparts as Parts.

Organization	Yes or No	Question 1 Comment
		We suggest that the SDT use this same format in the proposed FAC-001-2. Insert 'Parts 3.1 - 3.2' following Requirement R3 at the end of M3.Replace '...R1.1, R1.2 or R1.3.' at the end of the Moderate and High VSLs for R1 with '...Requirement R1, Parts 1.1 - 1.3.Replace '...R3.1 or R3.2...' in the High and Severe VSLs for R3 with '...Part 3.1 or Part 3.2...'.Under Requirement R3 in the Guidelines and Technical Basis, replace 'subparts' in the 1st and 5th lines with 'parts'. Also, insert a 'the' between 'to' and 'Guidelines' in the 2nd line of the same paragraph. Insert a 'the' in the 3rd bullet between the 'at' and the 'point' in the 2nd paragraph under Requirement R3 of the Guidelines and Technical Basis section.
Dynegy	Yes	
Lincoln Electric System	Yes	In Applicability Section 4.1.2.1, please delete the unnecessary "to". The statement should read "4.1.2.1 Generator Owner with an executed Agreement to conduct a study on the reliability impact of..." Within section A.5 "Background", recommend removing the reference to the specific reliability principle and instead reword the last sentence in A.5 as follows:" This objective supports the reliability principle that information necessary for planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably." If the above change cannot be made, LES suggests that at a minimum the drafting team include a footnote to reference the document of origin for "reliability principle 3". Although language from the principle is provided, incorporating a specific document reference would be beneficial for future reference.
Ingleside Cogeneration LP	Yes	Ingleside Cogeneration LP (ICLP) believes that the revisions to FAC-001 reflect the evolution in standard's development that has taken place over the last year or so. Specifically, a significant amount of overlap with existing PUC regulations related to Facility connection requirements has been

Organization	Yes or No	Question 1 Comment
		removed from R3 - consistent with Paragraph 81. We agree that the guidance section of the standard is the proper place for the detailed elements of a valid interconnection document. In addition, FAC-001 incorporates the risk-based concept by leaving it up to the entity to determine when a “material modification” is made. The previous version of the standard did not address modifications at all - a clear gap in the compliance framework. However, the project team chose not to describe the applicable modifications, which would be arbitrary in Ingleside’s view. Instead, well-understood industry norms can be applied without requiring CEA judgment.
Independent Electricity System Operator	Yes	
Pepco Holdings Inc.	Yes	
Xcel Energy	Yes	In general, we agree with the revisions and believe that work is moving the standard in the proper direction.
Virginia State Corporation Commission (member, Operating Committee)	Yes	Note that there is a typo in the "Applicability" part 4.1.2.1, which in part reads "....Agreement to conduct a study TO ON the reliability...."Also, R2 is very awkwardly worded. I believe the clarity could be improved a little by starting the sentence with the words "Within 45 days of...." and moving the current opening words ("Each applicable Generator Owner shall") to follow the new opening clause and be inserted just before the words "document Facility interconnection requirements and make them available on request." Thus, "Within 45 days of full execution of....interconnected Transmission systems, each applicable Generator Owner shall....."
Kansas City Power & Light	Yes	

Organization	Yes or No	Question 1 Comment
Tri-State Generation and Transmission Association, Inc.	Yes	Tri-State agrees with the revisions, however, we believe the term "materially modified Facility" should be defined. As the standard is currently written, it is hard to interpret what the standard drafting team means by "materially modified Facilities." That is a very broad term being used. There should be more guidance on what qualifies makes a facility "materially modified."
Georgia Transmission Corporation	Yes	For R3, part 3.1, GTC would like to suggest re-wording to the following:" Procedures for coordinating studies with affected entities of the impact of new or materially modified Facilities." For R3, part 3.2, GTC would like to suggest re-wording to the following:" Procedures for notifying those responsible for the reliability of affected system(s) of the impact of new or materially modified Facilities."
Exelon	Yes	Purpose: Consider modifications to the Purpose statement, something like: To ensure Transmission Owners and Generator Owners document and make Facility connection requirements available so that Entities seeking interconnection will have the information necessary for interconnecting facilities to the bulk power system. Substitute "Entities" for "Facilities" because the action, "seeking to interconnect" is being done by an "Entity", not a Facility. Applicability: Consider removing, "Applicable" from "Applicable Generator Owner" in 4.1.2. and add "Applicable to a" in the sub-requirement. The Applicability section is generally limited to Registered Entity functions in the Functional Model and Registry Criteria. The "Applicable Generator" qualification in 4.1.2.1 clarifies the class of Generator Owners the standard is applicable to.4.1.2. Generator Owner4.1.2.1 Applicable to a Generator Owner with an executed Agreement to conduct a study to on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission

Organization	Yes or No	Question 1 Comment
		systems. Requirement:R.1 Propose the SDT change “make them available upon request” to “make them available upon written request”.
Oncor Electric Delivery	Yes	
David Kiguel	Yes	Clarification is suggested to indicate that reference to end-user Facilities in R1 (1.3) includes large wholesale single customer interconnections as well as Distribution Provider system interconnections.
Wisconsin Electric	Yes	Our only concern with the new revised standard is that the term “Applicable Generator Owner” used in requirement R2 needs to be more clearly defined. We recommend modifying the definition of the term (or in some other place if that would be more appropriate) to include example(s) of where/how this might apply; e.g. “... Applicable GOs are those whose generator interconnections to the transmission system have been deemed ‘Transmission Elements’ and who have 3rd parties seeking to interconnect to those Transmission Elements. In these situations, these GOs take on the responsibility normally assigned to the TOs to ensure these new facilities meet all the interconnection requirements specified by the NERC standards.”
Northeast Utilities	Yes	suggest capitalizing “Applicable Generator Owner” throughout the standard (background and requirements)
Hydro One	Yes	
City of Tacoma - Tacoma Power	Yes	
HHWP	Yes	The background section includes the language, "This objective supports reliability principle 3", without any indication of the policy or document that this "reliability principle 3" is part of.

Organization	Yes or No	Question 1 Comment
Colorado Springs Utilities		
DTE Electric		DTE's Distribution Operations (DO) does not own transmission or generation, however we operate generation facilities. For this reason, DO has not responded to FAX-001 in the past.

2. **The SDT has proposed the following key revisions to FAC-002: • Revised the title and purpose to reflect the language in the requirements. • Rearranged the order of Functional Entities in the Applicability section to reflect the order in the Functional Model; changed "Planning Authority" in the applicability section to "Planning Coordinator" to reflect the Functional Model, as well as the recently revised TPL-001-4; added "Applicable Generator Owner" to the Applicability section so that R4 does not require a reference to FAC-001 • Separated R1 into four requirements to add clarity and better distinguish the actions required of the applicable entities. • Revised the subparts of R1 to remove elements that are more appropriate for Measures. • Modified R1.1 to ensure that the impact on third parties is appropriately addressed. • Modified R1.4 to remove the reference to the TPL Reliability Standards to avoid redundancy with the R1.2 reference to "all NERC Reliability Standards." • Updated all compliance elements: added Measures, VRFs, and Time Horizons to each requirement; modified the VSLs for conformance with the updated requirement language**

Summary Consideration:

Below, the SDT has provided responses to the comments related to FAC-002-2. Where possible, it has grouped similar comments and responded to them together.

Some commenters continue to believe that FAC-001 and FAC-002 are not necessary because their content is covered by FERC tariffs or other regulations. With the support of NERC staff, the SDT stands by its position on the "redundancy" of FAC-001 and FAC-002 with respect to existing FERC regulations. While there might seem to be redundancy from the perspective of entities that already comply with similar regulations, not every entity is subject to these other regulations. Tariffs are transactional in nature; the NERC standards are complementary and cover the same topics from a *reliability* perspective. The standards don't dismiss existing regulations. The standards acknowledge that those requirements exist, but as previously discussed, the requirement for Open Access Transmission Tariffs varies from region to region and cannot provide the same continent-wide consistency that NERC standards can and must provide. So although Facility connection requirements for public utilities are typically covered in OATTs under Sections 205 and 206 of the Federal Power Act, this leaves out electric utilities such as municipalities, cooperatives, and federal entities (e.g., the Bonneville Power Administration and the Tennessee Valley Authority), which are addressed under Section 215 of the Federal Power Act. OATTs also would not apply to non-jurisdictional entities that fall in NERC's footprint (e.g., Canadian entities). Further, FERC handles market-related documents like tariffs differently from reliability-related documents like standards, and reliability standards should not rely upon market-related documents to address reliability issues. Ultimately, the SDT agreed that Facility interconnection requirements are necessary for reliability and should continue to be explicitly addressed in NERC standards. **One commenter stated that the standard requirements would already be met, under their own tariff, by the time that the entity commits to construction of Facilities.** If an entity has already completed the

coordination and studies steps by the time of commitment to construct, then both the NERC Reliability Standard, and, presumably, the Pro Forma Generator Interconnection rules will have been satisfied. The SDT does not believe this renders the standard moot, but rather indicates that the standard is complementary with the FERC rules.

Some commenters suggested modifications to the Purpose statement. The SDT revised the Purpose statement to focus on the goal of studying the impact of interconnections rather focusing on the content of the requirements. The SDT agrees with some commenters that focusing on the goal of studying the impact of interconnections is a more appropriate way to word the higher-level Purpose than to focus on the content of the requirements.

Some commenters expressed concern about the addition of the reference to "material modification" and requested that the phrase be removed or clarified. The SDT clarifies that the phrase could mean the partial or complete retirement of any generation, transmission, or distribution interconnection facilities taking place outside the usual planning processes (if a Transmission Owner deemed those changes to constitute material modifications). The addition of the word "materially" is intended to allow entities to use engineering judgment to determine what constitutes a material modification for their system. The SDT added "materially" in response to stakeholder concern that "modified" was not clear. The SDT provided additional information in the Guidelines section to explain that the definition of "material" can be up to engineering judgment: *Entities should have documentation to supports the technical rationale for determining whether an existing interconnection was "materially modified." Recognizing that what constitutes a "material modification" will vary from entity to entity, the intent is for this determination to be based on engineering judgment.* While both new and modified interconnections that are planned in advance might apply under the TPL standards instead, FAC-001 and FAC-002 address the cases where a new interconnection or modification to an existing interconnection is pursued or proposed outside those longer-term TPL planning processes.

Some commenters preferred the term "assessment" to "studies." The SDT believes that "studies" and "assessments" are almost interchangeable, but recognizes that "studies" can imply the performance of simulations, and can preclude the assessment of existing studies or data. The SDT has clarified the language in R1 to use the verb "study" rather than "conduct studies," allowing for the assessment of existing studies or data in the case of some of the Parts of R1.

Some commenters expressed confusion about the difference between "Generator Owners" and "applicable Generator Owners." The Generator Owner in 4.1.5 is seeking to interconnect to another Facility, while the applicable Generator Owner in 4.1.6 is accepting the interconnection of another Facility. The requirements already distinguish which apply to Generator Owners (R2) and which apply to applicable Generator Owners (now R5). The SDT does not believe it is necessary to capitalize "Applicable," as the meaning of "applicable Generator Owner" is made clear in the Applicability section. **One commenter suggested that the SDT simply have FAC-002-2 reference the explanation of applicable Generator Owner in FAC-001-2.** Because the standard references applicable Generator Owners, as defined as a subset of

Generator Owners under FAC-001, FAC-002 needs to include applicable Generator Owners in its Applicability section. (It cannot simply reference the definition in FAC-001.) This subset was developed by the Project 2010-07—Generator Requirements at the Transmission Interface standard drafting team and was simply carried over to FAC-002.

Some commenters were confused about the reference to the reliability principles in the Background section of FAC-001 and FAC-002. Because many commenters were confused about the reference to the reliability principles (which are referenced in the NERC Standard Processes Manual and posted as a resource document on NERC's Standards Resources page), the drafting team has deleted that sentence from the Background section. Without the section about the reliability principles, the Background too similar to the Purpose to add value, so the Background has been deleted.

The SDT received many comments suggesting changes to R1 and its Parts. The SDT did not make any substantive changes to R1 or the list of Parts, but it did make some commenter-suggested changes for clarity.

- **One commenter suggested adding "and coordinate" to the main part of R1.** In order to study the reliability impact of an interconnection, the Planning Coordinator or Transmission Planner necessarily has to coordinate with the other entities to which this standard is applicable. Those entities are in turn required to coordinate and cooperate with the Planning Coordinator or Transmission Planner per R2, R3, R4, and now R5, and then R1, Part 1.4 requires the Planning Coordinator or Transmission Planner to evaluate and coordinate the studies with the entities involved.
- **Several commenters asked the SDT to resolve the Planning Coordinator/Transmission Planner "and" versus "or" terminology among R1, the other requirements, and the Measures and VSLs. One commenter asked for clarification of who leads the study when the Transmission Planner and Planning Coordinator are not the same.** The SDT intentionally maintained "and" in R1: "Each Transmission Planner and each Planning Coordinator." This wording gives the Transmission Planner and the Planning Coordinator the flexibility to determine which entity will study the reliability impact, while 1.4 addresses the option for the entities to jointly study the reliability impact. Once the Transmission Planner and the Planning Coordinator have determined which entity will study the reliability impact, the other Applicable entities will coordinate and cooperate with either the Transmission Planner and the Planning Coordinator so the remaining requirements say "Transmission Planner or Planning Coordinator," and both the Measure and the VSL language use "or."
- **One commenter suggested that the Parts are duplicative, particularly the main requirement and Part 1.1.** The SDT does not agree that the Parts are duplicative. In Part 1.1, the Planning Coordinator or Transmission Planner is required to evaluate the reliability impact of the Facility *on the affected system(s).* R1 is written as an umbrella requirement that includes both the Planning Coordinator or Transmission Planner's system and affected system(s). This allows for the inclusion of Part 1.1, which emphasizes the requirement to evaluate the impact on

affected system(s) and is distinct from the other Parts. (In other words, in Part 1.1., the Transmission Planner or Planning Coordinator may be conducting the same evaluations or studies as in 1.2, 1.3, or 1.4, but the distinction is that 1.1 focuses on affected system(s).)

- **One commenter said that R1 is not needed and that the Planning Coordinator and Transmission Planner should not coordinate studies.** The SDT disagrees with the commenter. This is a planning function and according to the NERC Functional Model, would fall to the Planning Coordinator and Transmission Planner, who serve in the reliability and transmission planning functions, respectively. The standard does not duplicate the TPL standard. The assessment requirement in FAC-002 is distinct from the TPL requirements; a Planning Assessment under TPL would be for *existing* Facilities or longer term plans for modifications, whereas FAC-002 requires a similar kind of assessment to TPL, but it is an assessment for new or materially modified interconnected Facilities that may or may not end up interconnecting or upgrading. Once the Facilities are interconnected, they would be covered under the TPL standards, but until then, the potential impact is evaluated under FAC-002. Considerations for new or materially modified interconnections can only be included in TPL sensitivity studies after they have gone through FAC-002 assessments and it has been determined that the interconnections will actually take place.
- **One commenter stated the obligation to assess and demonstrate reliability impact and performance on affected system(s) should be placed on the Transmission Owner or Transmission Planner of the affected system(s).** The SDT agrees that the obligation to assess and demonstrate reliability impact and performance is on the entities of the affected system(s), but the Planning Coordinator or Transmission Planner can study the impact on the affected system(s), which is what the standard requires.
- **One commenter asked for clarification that the Transmission Planner and Planning Coordinator only needs to study its own area.** The Functional Model limits the Transmission Planner and Planning Coordinator to actions within their own areas. Planning Coordinator is defined as "the functional entity that coordinates, facilitates, integrates and evaluates (generally one year and beyond) transmission facility and service plans, and resource plans *within a Planning Coordinator area…"* and a Transmission Planner is defined as "the functional entity that develops a long-term (generally one year and beyond) plan for the reliability (adequacy) of the interconnected bulk electric transmission systems *within a Transmission Planner area*."
- **One commenter suggested that R1 require notifying the Reliability Coordinator of the study results.** R3, Part 3.2 in FAC-001, which addresses procedures for notifying those responsible for reliability of the new or modified Facilities, is purposefully broad to account for the fact that the NERC Registered Entity responsible for the reliability of the affected system(s) will vary from interconnection to interconnection. This may include the Reliability Coordinator, the Planning Coordinator, etc.

- **Some commenters preferred "interconnected [transmission] systems" to "affected systems."** The SDT chose to use "affected" instead of "interconnected" because an interconnection could impact other systems that may not be physically interconnected to the system in question. The SDT chose to eliminate "transmission" because the studies should consider the impact on more than just the transmission system – impacts could include impacts generally on the electric system.
- **One commenter asked for clarification of the meaning of "impact of the new or materially modified Facilities on affected system(s)."** The SDT believes that "affected system(s)" can and does encompass the impact of new or materially modified interconnections within an entity's system, between different entities' systems, or on any affected system(s).
- **Some commenters were concerned about the use of the term "compliance" in Part 1.2.** The SDT agrees that "compliance" has a specific connotation in the NERC environment and that the standard should not give the impression that the Planning Coordinator or Transmission Planner is responsible for the interconnecting entity's future compliance with NERC Standards. The SDT has revised the standard to say that the Transmission Planner or Planning Coordinator "shall study the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities," including "…adherence with applicable NERC Reliability Standards…" The SDT believes this modification retains the original intended meaning – that the Transmission Planner or Planning Coordinator should consider all applicable NERC Reliability Standards as it studies a possible new interconnection or material modification to an existing interconnection– but reflects the fact that the entities cannot actually enforce another entity's future compliance with the Reliability Standards.
- **Several commenters suggested changes to Part 1.2, suggesting that criteria be added or removed.** The SDT thinks the current list (NERC Reliability Standards, regional and Transmission Owner planning criteria, and Facility interconnection requirements) encompasses all elements that should be considered. The SDT uses "regional…planning criteria" to encompass Regional Entity criteria, local regulations, Planning Coordinator criteria, and other planning criteria, to which an entity may be subject, apart from more localized Transmission Owner planning criteria.
- **One commenter asked for clarification regarding which Transmission Owner's planning criteria is applicable in Part 1.2.** The Transmission Owner planning criteria in 1.2 refers to the Transmission Owner that receives the interconnection request, however, it may be necessary to consider an affected system Transmission Owner's planning criteria as "regional" planning criteria.
- **One commenter suggested eliminating the words "Evaluation of…"** The SDT agreed that this phrase was redundant.

- **One commenter suggested restoring the reference to TPL standards in Part 1.2.** TPL standards are encompassed by Part 1.2, which states the requirement to study adherence to applicable NERC Reliability Standards. To directly reference another NERC Reliability Standard in FAC-002 would be inappropriate, given that the TPL standards – and even the organization of the NERC standard families – could change.
- **One commenter stated that Part 1.4 is administrative and vague, in large part because the requirement to coordinate recommendations is unclear.** The recommendations are to be coordinated with the affected system(s), depending on the circumstances of the interconnection. Coordination is demonstrable with emails and other documentation that indicates that all parties to an interconnection evaluated the results of the studies.
- **One commenter asked for clarification of what "alternatives considered" means in R1.4.** Similar to the "alternatives evaluated" language in TPL-001-4, "alternatives considered" is intentionally broad to allow for different interpretations from different entities based on the specifics of their systems.
- **One commenter said that Part 1.4 was focused on documentation and could be deleted and did not properly distinguish between the assessment and resulting report.** The SDT had deleted phrases like "Evidence that…" in the other Parts, and it has deleted "Documentation that…" in 1.4. The main focus of Part 1.4 is not documenting the items in 1.4; rather, the objective is to ensure that the Transmission Planner or Planning Coordinator include study assumptions, system performance, alternatives considered, and coordinated recommendations in the studies.

Some commenters requested clarification of the meaning of and distinction between "coordinate" and "cooperate." The SDT discussed whether "coordinate" and "cooperate" are appropriately measurable. The SDT agrees that the terms "coordinate" and "cooperate" encompass data provision; however, the terms further express the broader requirement that entities interact with one another in a productive way. The SDT has modified the language of the proposed R2-R4 to add detail ("including but not limited to the provision of data") regarding the meaning of coordination and cooperation. The requirement, however, may also be satisfied with evidence of in-person and web- or phone-based meetings ("coordination and cooperation") among involved entities, or other evidence. When an entity coordinates a study, it is taking the lead on organizing and completing that study, and when an entity cooperates, it is following the lead of another coordinating entity.

Some commenters did not agree with the reference to providing data in R2, R3, and R4. The SDT has modified the main part of R1 to require the Transmission Planner and Planning Coordinator "study" rather than "conduct studies," recognizing that not all of the R1 Parts require formal studies. The SDT is confident that the proposed R2-R5 (formerly R2-R4) language is appropriate. The data supplied by the entities in R2-R5 will be useful to the Transmission Planner or Planning Coordinator when conducting discrete studies, and will also assist the Transmission Planner or Planning

Coordinator evaluating adherence to NERC Reliability Standards, regional and Transmission Owner planning criteria, and Facility interconnection requirements. The reference to data in R2-R5 specifies the most likely method of cooperation and coordination – providing data – in an effort to provide specificity in the requirements, while maintaining flexibility since the provision of data is not the only manner in which entities may coordinate and cooperate.

One commenter identified a gap in the standard because it "cannot be applicable to an entity wishing to interconnect a generator that is not already registered as a Generation Owner. The NERC registration framework does not allow prospective registration and it should not. This further highlights why this standard is not necessary and why the tariff processes are necessary, important, and fully address the issue making the standard superfluous." The SDT believes that this is an issue that exists outside the specifics of FAC-001 and FAC-002. NERC cannot require prospective registration – an entity cannot be registered until it has interconnected to the Bulk Electric System – but that does not mean NERC should not require already registered entities to coordinate and cooperate when they participate in an interconnection or material modification to an existing interconnected Facility.

One commenter recommended that the standard only apply to the entity that has the tariff. The SDT maintains that it is essential to apply the standard to both the planning entities and the entities seeking to interconnect so that the entities seeking to interconnect have an obligation to cooperate on the Planning Coordinator and Transmission Planner's studies (including but not limited to the provision of data as requested by the planning entities). This requirement is in the currently enforceable version of FAC-002, and while the SDT has broken the original requirement into multiple requirements, it continues to support the intent of the currently enforceable version of FAC-002.

One commenter suggested that R2 and R3 be combined. While the SDT acknowledges that R2 and R3 *could* be combined, the SDT chose to write two requirements to make the obligations of those entities seeking to interconnect generation Facilities separate from the obligations of those entities seeking to interconnect transmission Facilities or electricity end-user Facilities. The SDT does not believe that the studies required by FAC-002 duplicate the requirements of the FERC Open Access Transmission Tariff. If a Generator Interconnection Study was conducted to satisfy the OATT, that study should satisfy the requirements of FAC-002 as well.

One commenter suggested a clarification to acknowledge the Planning Coordinator's responsibility to coordinate the impact on affected systems. The SDT points out that R1, Part 1.1 addresses the Planning Coordinator or Transmission Owner's requirement to study "the reliability impact of the new interconnection, or materially modified existing interconnection, on affected system(s)."

One commenter asked for verification that the standard will not impact the Transmission Planner's processes. The SDT does not intend to impact the process as required by an entity's Open Access Transmission Tariff. The standard should be

complementary to an entity's OATT; however, the SDT cannot verify that the standard will not impact an existing Transmission Planner's processes without being familiar with the applicable OATT.

One commenter noted that FAC-002's Purpose references the BES, while FAC-001's Purpose does not. Though all NERC Reliability Standards are applicable to the BES, the SDT has added a reference to BES to the FAC-001-2 purpose statement for clarification and consistency with the Purpose statement for FAC-002.

One commenter suggested that the SDT reconsider the use of the defined term "Facility." The SDT notes that NERC Reliability Standards are concerned with the Bulk Electric System, and so it is appropriate to use the defined term "Facility," which is limited to Bulk Electric System elements. The standard does not preclude entities from studying the interconnection of (lowercase 'f,' non-BES) facilities.

One commenter suggested modifying the Applicability section to make the description of an "applicable Generator Owner" part of the main description of Generator Owner. The SDT thinks this suggested change is a matter of preference but has the same impact as the current language, so it has elected to leave the language as is.

One commenter suggested changing "Planning Coordinator" to "Transmission Planning Coordinator." "Transmission Planning Coordinator" is not a NERC Functional Entity, and NERC Reliability Standards must apply to Functional Entities (or subsets of those entities).

One commenter suggested changing "integrating" to "interconnecting" in R1, for consistency with the language throughout the standard. The SDT agrees and has made the change.

One commenter noted that R2, R3, and R4 are administrative and duplicative with other regulations and standards. The SDT maintains that it's essential to apply the standard to both the planning entities and the entities seeking to interconnect so that the entities seeking to interconnect have an obligation to cooperate on the Planning Coordinator and Transmission Planner's studies (including but not limited to the provision of data as requested by the planning entities). As explained throughout the development process, the SDT is confident that the standards are not redundant, but rather, complement FERC regulations. While other standards may address advanced planning for both new and modified Facilities, FAC-001 and FAC-002 focus on new interconnections or modifications to existing interconnections when they are pursued or proposed outside longer-term planning processes. The standard does not duplicate other standards. Other standards address requirements for *existing* Facilities or longer term plans for modifications, whereas FAC-002 is an assessment for new or materially modified interconnections that are proposed and ultimately may not interconnect or upgrade. Upon interconnection, Facilities are subject to other NERC standards, however, prior to interconnection the potential impact of those Facilities must be evaluated under FAC-002.

One commenter stated that R2, R3, and R4 are redundant. The SDT is attempting to distinguish the entities in R2 and R3 based on the kinds of Facilities that the entities own. The Generator Owners in R2 and R5 (which used to be in R4) are distinguishable from one another: The Generator Owner in R2 is seeking to interconnect to another Facility, while the *applicable* Generator Owner in R5 is accepting the interconnection of another Facility.

One commenter suggested adding "materially modify" to R2, R3, and R4 for consistency with R1. The SDT agrees and has modified the requirements accordingly.

One commenter suggested adding "appropriate" after "its" in R2. The SDT believes that what constitutes "its [appropriate] Transmission Planner or Planning Coordinator" will be clear based on the interconnection that's being studied.

One commenter suggested changing R2 to reference "Applicable Generator Owner" and describe the responsibility of who initiates and consummates the agreement for the interconnection study with the Planning Coordinator or Transmission Planner. The Generator Owner in R2 is seeking to interconnect to another Facility. If the commenter is referring to the applicable Generator Owner addressed in R4, the initiation and consummation of an Agreement could change from case to case. Nevertheless, the applicable Generator Owner could, for example, execute an Agreement with the party seeking to interconnect to its Facility, and would coordinate on the interconnection studies with the Planning Coordinator or Transmission Planner.

One commenter expressed concern that the FAC-002 revisions would lack clarity when the Transmission Owner, Transmission Planner, and Planning Coordinator are not the same entity, in part because there is no specific requirement for the Transmission Owner to identify the Transmission Planner or Planning Coordinator with whom the interconnecting entity should work on the studies. FAC-001, R3 and now R4 already require Transmission Owners and applicable Generator Owners to include procedures for coordinated studies under FAC-002, as well as procedures for notifying those responsible for the affected system(s), in their Facility interconnection requirements. These procedures should include information about with whom the interconnecting entities need to work on the studies.

One commenter suggested removing Load-Serving Entity from R3 because it is redundant with the inclusion of Distribution Provider. Although there is significant overlap between Load-Serving Entities and Distribution Providers, an entity may only be required to register as a Load-Serving Entity, therefore, it is necessary to identify both Load-Serving Entities and Distribution Providers in this standard.

One commenter suggested revising R3 and R4 to capture the allowance in Part 1.4 for studies to be conducted by a single entity, and suggested combining the R3 and R4 requirements for Transmission Owners. The SDT believes that R3 and R4, as written, account for the possibility that the studies may be conducted by a single entity. The Transmission

Owners are distinguishable from one another, in that, the Transmission Owner in R3 is seeking to interconnect to another Facility, while the Transmission Owner in R4 is accepting the interconnection of another Facility.

One commenter suggested revision to FAC-002 to facilitate adding smaller end-user loads. The SDT is confident that FAC-002 is written broadly enough to allow entities to address smaller loads on their specific systems appropriately.

One commenter stated that the applicable Generator Owner requirement (now R5; previously R4) does not align with changes in FAC-001-2, and doesn't imply that the applicable Generator Owner will be performing studies like the Transmission Planner or Planning Coordinator are in R1. The SDT is confident that the addition of applicable Generator Owner in FAC-002-2 ensures alignment with FAC-001-2. The SDT does not anticipate that the Generator Owner will perform studies such as those conducted by the Transmission Planner and Planning Coordinator under R1.

One commenter suggested that R4 (now R5) become R1 to better bridge FAC-001 and FAC-002. The SDT considers it necessary to the understanding of the remaining requirements for R1 to precede R2-R5.

One commenter suggested adding Distribution Providers and Load-Serving Entities to the R4 (now R5). The SDT is confident that if the interconnection request implicates the Bulk Electric System, then it is likely that the Distribution Provider or Load-Serving Entity is already registered as a Generator Owner or Transmission Owner, and thus FAC-001 and FAC-002 would apply. However, it is more likely that if a Facility is interconnecting to a Distribution Provider or a Load-Serving Entity, the interconnection will not implicate the Bulk Electric System.

One commenter suggested that "Applicable Generator Owner" be more clearly defined and suggests a revisions that incorporates a reference to "transmission elements." "Applicable Generator Owner" is not a defined term, but rather a subset of Generator Owners carved out so that FAC-001-2 applies to them in specific instances. They are simply Generator Owners that have received a request to interconnect to their Facility, not necessarily Generator Owners that have been deemed "Transmission Elements."

One commenter suggested modifications to the Measures. The SDT strives to provide a sufficient level of detail in each Measure to support the intended goals of the associated Requirement.

One commenter suggested changes to the Time Horizons based on the definitions in the NERC Glossary. The Time Horizons incorporated into the standard refer to Time Horizons associated with compliance, as defined in this document: http://www.nerc.com/pa/Stand/Resources/Documents/Time_Horizons.pdf. For compliance purposes, a Long-term Planning Time Horizon is a planning horizon of one year or longer.

Organization	Yes or No	Question 2 Comment
Dominion	No	While Dominion agrees with the revisions from a technical perspective, Dominion has the following suggestions which Dominion believe will improve clarity and increase consistency. • Do not see the need to include both Generator Owner (4.1.5) and Applicable Generator Owner (4.1.6). If both are necessary, then the requirements need to be revised to indicate which apply to GO in 4.1.5 and which apply to GO in 4.1.6. • Requirements 2-4 basically state the same things. The entity has to "....coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator....". This would be acceptable if, for example, R2 applied only to GO, R3 applied only to TO and R4 applied only to DP. But, to apply R2 only to GO and then to also include GO in R4 is confusing and appears to create double jeopardy. Similar can be said of R3 which includes TO as does R4. It appears that the SDT is attempting to distinguish between coordinating and cooperating relative to the interconnection of the facility owned by the entity (R2 and R3) and coordinating and cooperating on the actual study or studies performed (R4). However, given the almost identical wording in all of the cited requirements, if this is the intent, Dominion suggests revising the requirements to more clearly distinguish the differences. • As mentioned in Requirements R2-R4, R1.1 - R1.3, these are not requirements (they are subparts) and should be rewritten in R2 to read as R1 subparts 1.1 - 1.3. R3 and R4 should also be rewritten to incorporate this change. • Dominion does not agree with inclusion of the phrase "materially modified" in this standard. In our view a modification (whether material or not) can only occur on an existing facility. According to the SAR this standard is meant to apply to a new (maybe proposed would be a better word) that might become interconnected (if ultimately constructed).

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	Requirement R1 should be revised to include the words “and coordinate” as shown following: R1. Each Transmission Planner and each Planning Coordinator shall conduct and coordinate studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities. The actual study results must be agreed to. In Applicability 4.1.2 of the CLEAN version of FAC-002-2 Transmission Planner Transmission Owner is shown as 4.1.2. Transmission Planner and Transmission Owner are shown on the same line. They must be separated. In addition, the redlined version of FAC-002-2 shows numbering not deleted that is not shown of the CLEAN version. FAC-002-2 Clean and redlined versions should have been compared prior to posting because the aforementioned discrepancies lead one to believe that the posted CLEAN and redlined documents did not use the same “base” document. FAC-002-2 CLEAN and redlined versions should be compared to check for additional discrepancies. In Part 1.1 the wording “the interconnected systems” should not be replaced by “affected systems”. In Part 1.1 the Transmission Planner is required to evaluate the reliability impact of the Facility. In Part 1.3 the TP is conducting steady state, dynamic, and short circuit studies as needed. These are the same activities. What other actions were envisioned by the SDT that the TP would do to evaluate reliability? Part 1.2 should be removed. The existing words present a compliance difficulty and do not capture the purpose of the Standard. Applicable NERC Reliability Standards will require the TP to explain the selection of applicable NERC requirements and what applicability is being measured against. For example, for a new 345 kV line is the TP evaluating compliance to FAC-003? The TP would not evaluate compliance to the TO Facility Interconnection requirement since many of the requirements are outside the TP function, such as the inspection requirement. The TP is evaluating compliance of a Facility to the performance criteria in TPL-001-4. In addition, NERC reliability standard requirements cannot make regional and Transmission Owner planning criteria mandatory. In Part 1.4 the first sentence stipulates collecting documentation that evidences the prior Parts. Part 1.4 should be deleted. This is a documentation requirement that could be placed in the measures. It is not important to require the

Organization	Yes or No	Question 2 Comment
		documentation of the alternatives considered, since the purpose of the Standard is to evaluate the impact of the selected solution; all solutions should have no adverse impact. In Requirements R2, R3 the wording "coordinate and" should be removed. How does an entity comply with "coordinate"? R1.1, et al., should be identified as "Parts" in the standard. The SDT should determine whether or not the requirements conflict or are redundant from regulatory requirements that exist under FERC's Pro Forma Generator Interconnection Procedures. For example, under the proposed R2, "Each Generator Owner seeking to interconnect generation Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3.". FERC's Pro Forma Generator Interconnection Procedures already specify all requirements that a Generator Owner must meet to get a new or materially modified unit interconnected to the transmission system. It is also unclear from a chronological perspective if these requirements need to be met and be demonstrable for every proposed facility that gets included in a planning study, or is only applicable for those that have reached a definite stage of construction. By the time entities commit to construction of facilities, the aforementioned steps of coordination and studies will have already been met making these requirements moot. Suggest the following to improve clarity and consistency in the document: • In the Applicability Section, do not see the need to include both a Generator Owner (Part 4.1.4) and Applicable Generator Owner (Part 4.1.5). "Applicable" can be added as a descriptor for Generator Owner, and its definition explained in the appropriate Rationale Box. If kept, Applicable Generator Owner used in the standard should be capitalized. "Applicable" should be removed from the wording of R4. • Requirements R2-R4 basically state the same things. The entity has to "....coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator....". This would be acceptable if, for example, R2 applied only to GO, R3 applied only to TO and R4 applied only to DP. But, to apply R2 only to GO and then to also include GO in R4 is confusing and appears to

Organization	Yes or No	Question 2 Comment
		create double jeopardy. It can be similarly said of R3 which includes TO, as does R4. It appears that the SDT is attempting to distinguish between coordinating and cooperating relative to the interconnection of the facility owned by the entity (R2 and R3) and coordinating and cooperating on the actual study or studies performed (R4). However, if this is the intent, given the almost identical wording in all of the cited requirements, suggest revising the requirements to more clearly distinguish the differences. The Rationale Boxes for Requirements R2 through R4 attempt to clarify the requirements, but the wording of the requirements need further clarification. • Parts 1.1-1.3 are cited in Requirements R2-R4. These are not requirements (they are Parts) and should be rewritten in R2 to read as Parts 1.1 - 1.3. R3 and R4 should also be rewritten to incorporate this change. • The inclusion of the phrase "materially modified" should not be used in this standard (including the Guidelines and Technical Basis). A modification (whether material or not) can only occur on an existing facility. The SAR clearly indicates its application to new facilities that might become interconnected (if ultimately constructed). In the Guidelines and Technical Basis Section the SDT did not provide any justification or resolution for a determination of materiality. Alternatively, should the SDT choose not to remove the phrase "materially modified", then the phrase needs to be explained in the Rationale Box. We propose that "material" means a modification which would have a reliability risk to the BES if not studied. Revise Applicability 4.1.6.1 (remove "to on") to read: 4.1.6.1 Generator Owner with an executed Agreement to conduct a study to determine the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission System.Requirements R3 and R4 should be revised to capture the allowance in Part 1.4 for studies to be conducted by a single entity. As written R3 says TO shall coordinate and cooperate. We believe the correct idea to be that the TO will coordinate when the TP doesn't provide the entire

Organization	Yes or No	Question 2 Comment
		study result. The data provision in R3 and R4 should be its own requirement, i.e. the TO shall provide data, upon request, to the TP to support R1.
NCPA Generation	No	Proposed Purpose Modification: To evaluate the the reliability impact of interconnecting new or materially modified Facilities on the Bulk Electirc System based on the results of the Facility Interconnection Studies Proposed Modification to R2:Each Applicable Generator Owner having executed an agreement from Facilities seeking interconnection (as defined in FAC-001-2) shall coordinate and cooperate with the studies identified under R1 with its transmission Panner or the Planning Coordinator including but not limited to the scpe outlined under R1 above. It would be helpful to describe the responsibility of who initiates and consummates the agreement for the interconnection study with the PC or TP. This would help clarify the comments made for FAC-001 as well.
MRO NERC Standards Review Forum	No	R1 & R4. As written "Each TP AND each PC shall..." both conduct studies, yet in R2 & R3 applicable entities shall "cooperate with it TP OR PC...". Recommend that in R1 & R4 the "and" be replaced with "or". This will allow a single study to be accomplished where there are multiple TPs or PCs that have the responsibility for reviewing TOs or GOs interconnection requests. R1: Clarify that Transmission Planners and Planning Coordinators only conduct studies (assessments) of interconnections that may affect their respective area with addition of wording like, ". . . or electric end-user Facilities that may affect their respective area." R1.2: Clarify and improve R1.2 to require the consideration of any applicable planning criteria or interconnection requirements (e.g. regional, TO, GO, DP) and allow the affected entities to decide which of conflicting planning criteria or interconnection requirements to be applicable for the facility interconnection assessment. Possible wording could be, ". . . applicable NERC Reliability Standard, applicable planning criteria, and applicable Facility interconnection requirements". R1.4: Clarify that "alternatives considered" refers to the required consideration of alternatives for any necessary system modifications that would be necessary to avoid any adverse BES reliability that would be introduced by placing the facility interconnection in service, not a requirement to consideration

Organization	Yes or No	Question 2 Comment
		alternative interconnect options to the proposed facility interconnection. [If a better facility interconnection is discovered and selected, then the FAC-002-2 requirements would simply apply to the alternate facility interconnection.] Potential clarification wording could be "alternatives considered for any system modifications needed to accommodate the facility interconnection". A.5, R1, R1.1: Clarify the meaning of the expression, "materially modified". The expression can be interpreted to include the partial or complete retirement of any generation, transmission, or distribution interconnection facilities. We accept this interpretation that the retirement of interconnection facilities may impact BES reliability in the planning horizon as much as interconnection facility additions or changes. If the inclusion of the retirement aspect is to be intended, then clarification wording could be added to the A.5 Background section like, "Materially modified Facilities includes either additions to or removals from exiting interconnection facilities". Otherwise, the clarification wording could be added to the A.5 Background section would be, "Materially modified Facilities only includes additions to, not removals from, exiting interconnection facilities."Title, A.3, A.5, R1, R1.4, R2, R3, R4: Reconsider the use of the term "assessment" in the standard, rather than only in R1.4. The NERC Glossary of Terms defines the term, Planning Assessment, as "Documented evaluation of future Transmission system performance and Corrective Action Plans to remedy identified deficiencies." And the TPL standards describe system planning performance requirements in the framework of assessments that are supported by studies and analyses. In our industry the term, "studies" implies the performance of simulations, but not all interconnection evaluations, particularly electricity end-user interconnections, need study or analysis. Simple information can be sufficient to make certain assessments. Since the purpose of FAC-002-2 appears to be the performance of Planning Assessments on proposed Facility Interconnections, perhaps the wording of the title should be changed to something like, "Facility Interconnection Planning Assessments" or "Facility Interconnection Planning Performance Requirements" and the term "assessments" should be used instead of "studies" in the standard, except for R1.3.

Organization	Yes or No	Question 2 Comment
Florida Municipal Power Agency	No	FMPA objects to referring to "applicable Reliability Standard in R1 bullet 1.2. Applicable to whom? The standards applicable to the PC/TP, the GO/GOP/TO/TOP, or both? We presume the intent is applicable to the PC/TP and that the PC/TP is not to evaluate the ability of a GO/GOP or interconnecting TO/TOP to meet standards applicable to them (which is specifically prohibited by Order 1000). If the intent is all standards applicable to the PC/TP, does that mean that impacts to SOLs and IROLs need to be evaluated? Do extreme contingencies need to be studied in the TPL standards? Do we need to study the impact of changes on losses on load forecasts? Do we have to reevaluate lines below 200 kV for compliance with PRC-023? If the intent is that the PC /TP has sole discretion as to what they believe is applicable, does that mean they can only study single contingencies and not N-2? In other words "applicable" is too ambiguous and FMPA recommends retaining the intent of FAC-003 to TPL-001-4 P1 through P7, or stated differently, TPL standards for non-extreme events.R2, R3 and R4 are administrative in nature, duplicative with other regulations (e.g., pro forma OATT), duplicative with other standards (e.g., MOD-010. MOD-012) and is not needed.
ACES Standards Collaborators	No	(1) We disagree with the need for this standard. First, virtually every transmission owner of a BES Element is covered under a FERC approved tariff in the United States either under an approved regional tariff such an ISO/RTO tariff or under their own tariff. Even most transmission owners whose transmission rates are not regulated by FERC have FERC approved tariffs as a result of the reciprocity requirements in the FERC pro forma tariff. Those tariffs require interconnection processes, facility studies and facility connection analysis, which are more rigorous than this NERC standard. This would mean this entire standard meets paragraph 81 criterion B7 in that is redundant with another regulation and is, thus, unnecessary. This criterion is very clear that “in the case of redundancy, the task or activity itself may contribute to a reliable BES, but it is not necessary to have two duplicative requirements on the same or similar task or activity. Such requirements can be removed with little or no effect on reliability and removal will result in an increase in efficiency of the ERO

Organization	Yes or No	Question 2 Comment
		compliance program." Second, this standard has a major gap that cannot be addressed or closed due to the registration process. This proposed standard cannot be applicable to an entity wishing to interconnect a generator that is not already registered as a Generation Owner. The NERC registration framework does not allow prospective registration and it should not. This further highlights why this standard is not necessary and why the tariff processes are necessary, important, and fully address the issue making the standard superfluous. (2) If this standard persists, it should only apply to the entity that has the tariff that requires the study whether that entity is the PC, TP or some other entity. All requirements applying to non-study entities (i.e. GO, TO, DP, LSE) should be removed. The study entity is responsible per tariff processes and requirements to ensure studies are completed to assess reliability impacts and that the interconnection will meet all planning criteria and standards. The gap previously highlighted regarding a never before registered entity requesting an interconnection highlights why it is truly the entity that has the tariff that has the responsibility to complete the studies. It is their tariff that will ensure an entity that is not NERC registered will be interconnected in a reliable manner. It is their tariff that allows them to curtail the interconnection process if the interconnection requestor does not follow the interconnection process (e.g. supplying necessary and timely data). This will provide more incentive for an interconnection requestor that truly needs the new interconnection than a NERC standard ever will. (3) The purpose needs to be modified. The purpose is simply to study the impact of new or materially modified Facility interconnections. It is not to coordinate studies. While coordination may be required, it is ambiguous and does not define the purpose. Please strike "and coordinating" from the purpose statement. (4) Applicability section 4.1.6.1 has a grammatically error. Remove "to" from the phrase "to on the reliability impact". (5) Part 1.2 is redundant, creates potential for double jeopardy, is ambiguous and can be interpreted many ways which can only lead to inconsistent compliance

Organization	Yes or No	Question 2 Comment
		outcomes. First, what does it mean to evaluate compliance against NERC Reliability Standards in terms of a Transmission Planner or Planning Coordinator studying the reliability impacts of a Facility interconnection? Does this mean the PC and TP must evaluate compliance against their requirements or against the requirements of the requestor (i.e. DP, GO, or TO)? Second, these other NERC requirements still apply without this reference in this Part 1.2. Thus, a violation of those requirements in the other standards will also necessarily cause a violation of this part resulting in double jeopardy. Please strike the portion of this requirement that references evaluating the studies against compliance with other NERC reliability standards. (6) Part 1.4 meets Paragraph 81 criteria, is ambiguous which can only lead to inconsistent compliance outcomes and may be inconsistent with FERC approved tariffs. With who exactly are the recommendations to be coordinated? The interconnecting requesting entity? If so, that would violate FERC approved tariffs because it is the FERC transmission provider (i.e. tariff administrator) that is responsible for conducting studies and determining what is required to interconnect. Also, what does it mean to coordinate with the entities involved? Coordination is vague and not measurable which again will lead to inconsistent compliance outcomes. If the part is retained it should state exactly what is required to coordinate and not use this term. If the SDT cannot define what is meant by coordination, then they should question if the requirement is truly necessary. Furthermore, Part 1.4 meets Paragraph 81 criteria because it is administrative (criterion B1) in nature and requires documentation (criterion B3) which is not necessary to protect the reliability of the BES. Think of it this way. Would absence of this document cause a BES reliability problem or a compliance problem (i.e. proving the study was completed)? We believe it is the latter because if the document does not exist the study may still have been completed and not the former and the part should be struck in its entirety. Obviously, the need to comply would incent the applicable entity to document the study which further supports it removal or moving it to the application guidelines section.

Organization	Yes or No	Question 2 Comment
		(7) If Requirement R3 persists, Load-Serving Entity should be removed from the requirement. While the functional model does indicate that the LSE has some responsibility in determining the need for a new Facility interconnection, this is not the same as seeking or requesting a new Facility interconnection. The functional model is clear that the DP has this responsibility with the statement that the DP develops interconnection agreements with TOs on a facility basis. Part of the end result of a Facility interconnection process is an interconnection agreement. Thus, while the DP may have to work with the LSE if they are different, it is the DP that has the responsibility to submit the request, submit the data, follow the process and develop the interconnection. Furthermore, they will not be different entities because section III.a.4 of Appendix 5B - Statement of Compliance Registry Criteria in the Rules of Procedure is clear that a DP will also be registered as an LSE so inclusion of the LSE is redundant. (8) If Requirements R2, R3, and R4 persist, they need to be revised because they are ambiguous which will lead to inconsistent compliance outcomes and are inconsistent with R1. First, what does coordinate and cooperate mean? How will it be measured? Will the PC or TP be asked by auditors if they feel the interconnection requestor cooperated? Coordination and cooperation are terms that are vague when used in standards requirements and nearly impossible to measure compliance against. Based on other language in the requirements and the VSL language, the purpose appears to be focused on ensuring that the applicable entities supply data. If this is what is intended, then the requirements should state this directly rather than using vague language such as coordinate and cooperate. Either way, this language needs revisions if the requirements persist. Second, each of the requirements state that data shall be provided as described in R1.1 through R1.3. There is no data described in Part 1.1 through Parts 1.3. Rather these parts describe what the studies must include. Third, there are not sub-requirements and these requirements should not use the R descriptor for R1.3 through R1.3. Rather, these should be referred to as Parts 1.1 through 1.3. In previous guidance provided to the Commission, NERC has declared that they will no longer write standards with sub-requirements but rather

Organization	Yes or No	Question 2 Comment
		with numbers lists that must all be met referred to as parts or bulleted lists with options.
Florida Power & Light	No	The revision wording is only a slight improvement to the original poorly crafted standard, and now seems repetitive in requirements 2, 3, and 4. (Appears that R2 and R3 can be combined, and the "gap" that R4 is trying to address is not clear.) The fact that FAC-002-1 R1 now requires studies instead of assessments is a slight concern because we already perform Generator Interconnection Studies for customers under the FERC OATT with prescriptive language to meet the FERC requirements. At least for generator interconnections, the required study would be duplicative, whereas an assessment of the study might be more appropriate. Also, the phrase in R2, R3, and R4 "including but not limited to the provision of data, as described in R1.1 - R1.3." seems circular because the sub-requirements do not refer to provision of any data, although data would be required to perform the evaluations that R1.1-R1.3 refer to, and coordination and cooperation should be required to get any necessary data. The phrase should be replaced with just a period. Similarly, the Measures for R2, R3, and R4 have a circular reference phrase "that it met all requirements in Rx." The phrase should be replaced with "that it coordinated and cooperated, to the extent requested by its Transmission Planner or Planning Coordinator." Finally, the clean draft has the TP and TO on the same line under Functional Entities in the Applicability section. They should be separate.
ISO/RTO Council Standards Review Committee	No	Below are some comments/proposed changes for consideration: a. Applicability Section 4.1: Suggest adding Load-Serving Entity in view of the responsibility assigned to these entities in Requirement R3. b. Applicability Section 4.1.2: Split Transmission Planner and Transmission Owner. c. Applicability Section 4.1.5: Applicable Generator Owners: The word "to" in the part "...a study to on the reliability impact..." should be removed. Also, suggest to combine 4.1.5 with 4.1.5.1 by revising 4.1.5 to: 4.1.5 Generator Owner with an

Organization	Yes or No	Question 2 Comment
		executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems. d. Similar comments on Time Horizon as indicated in Q1, above, for FAC-001-2 also apply to the four requirements in FAC-002-2. e. Requirement R1: We do not believe R1 is needed. The need for the PC and TP to conduct studies to assess reliability impacts of proposed additions/modification by TOs, DPs and GOs is not identified or stipulated in the existing FAC-002-1. While we agree that PC and TP have a role to review and coordinate studies by entities that propose to add new or modify existing Facilities, their role should be to review and concur/approve the proponent's assessments only. Wrt considering impacts of the proposed additions/modifications, in the PC's and TP's periodic assessments to meet the TPL standard requirements, they are already required to consider and include approved and proposed Facility changes in their impacts assessed. Stipulating this requirement in the FAC-002 standard will result in duplicating with the TPL standard. We suggest removing R1 from the standard. (The CAISO wishes to be excluded from the comment provided above under bullet "e.") The obligation to assess and demonstrate reliability impact/performance on the affected system(s) should be placed on the TO/TP of the affected system(s) to study their own system, with the proponents themselves (i.e., the GO, TO, DP, LSE, and not the PC) initiating the interconnection study process with the TO/TP of the affected system(s). f. If the SDT should decide to retain R1, then we would suggest the following changes: i. R1 should have an "or" instead of "and" as shown below to be consistent with the terminology used in the VSLs.R1. Each Transmission Planner or each Planning Coordinator shall conduct studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities. ii. R1.1 We recommend continuing to use the original terminology of: "interconnected transmission systems" rather than "affected system(s)." The use of

Organization	Yes or No	Question 2 Comment
		the term "affected system(s)" is not clear, as FERC uses the term affected systems as being neighboring systems other than one's own system. iii. R1.2 Add: Planning Coordinator planning criteria. R1.2 should include Planning Coordinator planning criteria. The use of the term "regional" is unclear as to whether or not it includes Planning Coordinator planning criteria. We suggest modifying R1.2 to read: R1.2 Evaluation of compliance with applicable NERC Reliability Standards; regional criteria, Planning Coordinator planning criteria, Transmission Owner planning criteria; and Facility interconnection requirements; iv. For R2-R4, should add: "or materially modify" as in "seeking to interconnect or materially modify generation Facilities". v. R2-R4, should add: "including but not limited to the provision of data for the required studies". We suggest modifying the language in R2-R4 to read: Each entity (GO, TO, DP, LSE) seeking to interconnect or materially modify generation Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data for the required studies as described in R1.1-R1.3.The SRC would also like to raise the following issue as a general matter: The SRC requests that the Standard Drafting Team assess whether these Requirements conflict or are redundant from regulatory requirements that exist under FERC's Pro Forma Generator Interconnection rules. For example, under proposed FAC-002, R2, "Each Generator Owner seeking to interconnect generation Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3." FERC's pro forma Generator Interconnection rules already specify all requirements that a Generator Owner must meet to get a new or materially modified unit interconnected to the transmission system. It is unclear from a chronological perspective if these requirements need to be met and be demonstrable for every proposed facility that gets included in a planning study or is only applicable for those that have reached a stage of construction. By the time entities commit to construction of facilities, the aforementioned steps of

Organization	Yes or No	Question 2 Comment
		coordination and studies will have already been met making these requirements moot.
Rayburn Country Electric Cooperative	No	Proposed requirement: Purpose: To evaluate the impact of interconnecting new or materially modified Facilities on the Bulk Electric System by conducting and coordinating studies. R3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3. Consider the use of the defined term Facility. For example, connecting a non- BES facility (i.e. a 138/25 kV transformer) to a BES transmission line. Per the requirement, I would not have to perform any studies since by definition I am not connecting a "Facility". I am connecting a facility however. FACILITYA set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.) Suggested purpose and requirement: Purpose: To evaluate the impact of interconnecting new or materially modified facilities on the Bulk Electric System by conducting and coordinating studies. R3 Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to add new or materially modified interconnections to BES transmission Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1.1-R1.3
Dynegy	No	While we agree with the overall goal of FAC-002-2, Dynegy is requesting that the SDT define within the Standard what is considered "material modified generation". In order to provide consistency across the BES it is essential to define this term.
Lincoln Electric System	No	Although appreciative of the drafting team's efforts in revising FAC-002, LES believes the proposed standard lacks sufficient clarity regarding the responsibilities of applicable entities and introduces unnecessary confusion with the addition of "Applicable Generator Owner" (4.1.5.1) as a functional entity. In particular, LES is

Organization	Yes or No	Question 2 Comment
		confused why the drafting team chose to create separate requirements within the standard based on whether an entity seeks to interconnect a Facility versus if an entity receives a request to interconnect to a Facility. Regardless of where or how the possible interconnection originates, LES believes the onus is on the registered entity with the impacted Facility (GO, TO, LSE, or DP) to coordinate and cooperate on studies for its Facilities with its Transmission Planner and Planning Coordinator. In consideration of the above comments, LES recommends the drafting team consolidate Requirements R2, R3 and R4 and instead state the following as a single requirement: "Each Generator Owner, Transmission Owner, Load-Serving Entity and Distribution Provider shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its transmission, generation, or electricity end-user Facilities, including but not limited to the provision of data as described in R1.1-R1.3." Additionally, issues identified in the comments for FAC-001-2 apply to FAC-002-2 as well.
Manitoba Hydro	No	On page 5, studies must now include "Evaluation of compliance with applicable NERC Reliability Standards ...." Whether there is compliance is a legal determination, and for our particular entity, one that can only be made by the Public Utilities Board. A study could perhaps look at the interconnection's "capability" of becoming compliant, but not compliance itself. The requirement is quite broad and subject to interpretation on the word "applicable". The SDT should clarify applicable or limit scope to system performance, for example. Applicable Generator Owner is only used in R4 in FAC-002-2 regarding coordinating and cooperating. This is a good thing from our point of view but it doesn't align with the changes made to FAC-001-2 and doesn't imply that the applicable GO will be performing studies like the TP/PC are in R1.
Ameren	No	(1) We believe this draft FAC-002-2 should require the TO, TP or TC, as appropriate, provide an applicable GO or GO owning an existing generating Facility, a detailed

Organization	Yes or No	Question 2 Comment
		technical definition, with practical examples, of what constitutes new or materially modified generator Facilities.
Independent Electricity System Operator	No	We agree with most of the revisions. Below are some comments/proposed changes for consideration: a. Applicability Section 4.1: Suggest to add Load-Serving Entity in view of the responsibility assigned to these entities in Requirement R3. b. Applicability Section 4.1.2: Split Transmission Planner and Transmission Owner. c. Applicability Section 4.1.5: Applicable Generator Owners: The word "to" in the part "...a study to on the reliability impact..." should be removed. Also, suggest to combine 4.1.5 with 4.1.5.1 by revising 4.1.5 to: 4.1.5 Generator Owner with an executed Agreement to conduct a study to on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems. d. Requirement R1: We do not believe R1 is needed. The need for the PC and TP to conduct studies to assess reliability impacts of proposed additions/modification by TOs, DPs and GOs is not identified or stipulated in the existing FAC-002-1. While we agree that PC and TP have a role to review and coordinate studies by entities that propose to add new or modify existing Facilities, their role should be to review and concur/approve the proponent's assessments only. Wrt considering impacts of the proposed additions/modifications, in the PC's and TP's periodic assessments to meet the TPL standard requirements, they are already required to consider and include approved and proposed Facility changes in their impacts assessed. Stipulating this requirement in the FAC-012 standard will result in duplicating with the TPL standard. The obligation to assess and demonstrate reliability impact/performance on the affected system(s) should be placed on the proponents themselves, i.e., the TO, GO, LSE, DP, not the PC or TP. We suggest to remove R1 from the standard.

Organization	Yes or No	Question 2 Comment
American Electric Power	No	AEP objects to the text "coordinate and cooperate" as included in Requirements R2, R3, and R4, and "coordinate" in Requirement 1.4. Such verbiage is very subject to interpretation, and would be inconsistently applied in audits. AEP suggests replacing these words and phrases with more descriptive text on what action(s) is expected. Although AEP supports the overall efforts of the drafting team in revising FAC-001 and FAC-002, we strongly disagree with any inclusion of the words "coordinate" or "cooperate" and do not foresee voting in the affirmative on this standard as long as those words remain. Regarding the references to facilities which are "materially modified", and the documentation needed to support one's technical rationale - would such references be pre-written and establish how, in general, they are to be applied in future decision making? Or instead, would this documentation be written on a case-by-case basis for providing justification on the decision that was made in each specific instance? Please provide clarification.
American Transmission Company, LLC	No	ATC does not agree with all the revisions. ATC requests that the SDT consider the following recommendations for improvement and clarification of the Standard. a. Applicability Section 4.1.6.1: Please delete the second "to" in "Generator Owner with an executed Agreement to conduct a study to (DELETE) on the ... " . It did not read properly. b. Requirement R1: Please clarify that Transmission Planners and Planning Coordinators only conduct studies (assessments) of interconnections that may affect their respective area with the addition of wording like, ". . . or electric end-user Facilities that may affect their respective area." c. Requirement R1: Please resolve the "and" versus "or" terminology between R1 and Requirements R2-R3-R4. R1 includes an "and" that obligates Transmission Planners and Planning Coordinators to study (assess) the same facility interconnection (duplicative efforts). However, Requirements R2-R3-R4 allows the GO, TO, and DP to coordinate with only the TP or the PC. ATC recommends the wording in R1 be changed from "and" to "or". The use of "or" would allow one TP or PC to meet the

Organization	Yes or No	Question 2 Comment
		requirement for other TPs or PCs, but would not prevent other TPs or PCs performing studies independently or jointly if desired. d. Requirement R1.1: Please clarify the meaning of "impact of the new or materially modified Facilities on affected system(s)". These words can be interpreted in at least two ways - (1) impact of integrating Facilities between two entities or (2) impact of integrating Facilities within a TO's system (e.g. add 138 kV line, add 345/138 kV transformer, add 138/69 kV transformer, add 138 kV capacitor bank), as well as Facilities between different entities. For Interpretation 1, possible wording could be, "impact of the new or materially modified Facilities between different entities on any affected system(s)." For Interpretation 2, possible wording could be, "impact of the new or materially modified Facilities within an entity's system, or between different entities' systems, on any affected system(s)." e. Requirement R1.2: Please clarify and improve R1.2 to require the consideration of any applicable planning criteria or interconnection requirements (e.g. regional, TO, GO, DP) and allow the affected entities to decide which of conflicting planning criteria or interconnection requirements to be applicable for the facility interconnection assessment. Possible improvement of the wording is as follows, ". . . applicable NERC Reliability Standard, applicable planning criteria, and applicable Facility interconnection requirements". f. Requirement R1.4: Please clarify that "alternatives considered" refers to the required consideration of alternatives for any necessary system modifications that would be necessary to avoid any adverse BES reliability. The requirement should only apply to needed corrective actions introduced by placing the facility interconnection in service, not a requirement to consider alternative interconnect options to the proposed facility interconnection. [If a better facility interconnection is discovered and selected, then the FAC-002-2 requirements would simply apply to the alternate facility interconnection.] Potential clarification wording could be "alternatives considered for any system modifications needed to accommodate the facility interconnection".

Organization	Yes or No	Question 2 Comment
		g. Section A.5 and Requirements R1, R1.1: Please clarify the meaning of the expression, "materially modified". This expression may also be interpreted to include the partial or complete retirement of any generation, transmission, or distribution interconnection facilities. ATC believes that the retirement of interconnection facility may impact BES reliability in the planning horizon as much as interconnection facility additions or changes. If the inclusion of the retirement aspect is intended, then clarification wording should be added to Section A.5 Background. Recommended wording is as follows: "Materially modified Facilities include either additions and/or removals from exiting interconnection facilities". Otherwise, you may clarify Section A.5 by inserting the following: "Materially modified Facilities only includes additions to, not removals from, exiting interconnection facilities." h. Standard's Title plus Sections A.3, A.5 and Requirements R1, R1.4, R2, R3, R4: Please consider the use of the term "assessment" throughout the standard rather than referencing and using the term "studies", except for R1.3. The NERC Glossary of Terms defines the term, Planning Assessment, as "Documented evaluation of future Transmission system performance and Corrective Action Plans to remedy identified deficiencies." The TPL standards describe system planning performance requirements in the framework of assessments that are supported by studies and analyses, as needed. In the transmission industry the term, "studies" implies the performance of simulations, but not all interconnection evaluations, particularly electricity end-user interconnections, need study or analysis. The consideration of simple information can be sufficient for some assessments. Since the purpose of FAC-002-2 appears to be the performance of Planning Assessments on proposed Facility Interconnections, we recommend that wording of the title be changed as follows: "Facility Interconnection Planning Assessments" or "Facility Interconnection Planning Performance Requirements", instead of "Facility Interconnection Studies".
ReliabilityFirst	No	ReliabilityFirst Abstains and offers the following comments for consideration: 1. General Comment - ReliabilityFirst believes the term "materially", which is used throughout the Standard, is ambiguous and opens the requirements up to

Organization	Yes or No	Question 2 Comment
		unnecessary interpretation. Without further clarity and definition, this term may lead to unintended compliance complications. ReliabilityFirst recommends removing this term from the entire standard. 2. Requirement R1, Part 1.2 - ReliabilityFirst believes the term "compliance" in Requirement R1, Part 1.2 is a misapplication of this term. The term "compliance" has a specific connotation in the NERC environment. Furthermore, there is no "compliance" related to regional and Transmission Owner planning criteria and Facility interconnection requirements. ReliabilityFirst believes the term "adherence" is more appropriate in this circumstance. ReliabilityFirst recommends the following for consideration: "Evaluation of adherence to applicable NERC Reliability Standards; regional and Transmission Owner planning criteria; and Facility interconnection requirements". 3. Requirement R2 - ReliabilityFirst believes the term "coordinate and cooperate" is ambiguous and may lead to unintended compliance implications. ReliabilityFirst also believes the language, "including but not limited to the provision of data as described in R1.1-R1.3", is not needed and adds little value because it simply restates the language in the Requirement R1 sub-parts. ReliabilityFirst suggests the following for consideration: "Each Generator Owner seeking to interconnect generation Facilities shall [jointly participate in] studies with its Transmission Planner or Planning Coordinator." 4. Requirement R3 - ReliabilityFirst believes the term "coordinate and cooperate" is ambiguous and may lead to unintended compliance implications. ReliabilityFirst also believes the language "including but not limited to the provision of data as described in R1.1-R1.3" is not needed and adds little value because it simply restates the language in the Requirement R1 sub-parts. ReliabilityFirst suggests the following for consideration: "Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to interconnect transmission Facilities or electricity end-user Facilities shall [jointly participate in] studies with its Transmission Planner or Planning Coordinator"

Organization	Yes or No	Question 2 Comment
		5. Requirement R4 - ReliabilityFirst believes the term “coordinate and cooperate” is ambiguous and may lead to unintended compliance implications. ReliabilityFirst also believes the language “including but not limited to the provision of data as described in R1.1-R1.3” is not needed and adds little value because it simply restates the language in the Requirement R1 sub-parts. ReliabilityFirst suggests the following for consideration: “Each Transmission Owner and each applicable Generator Owner shall [jointly participate] with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its Facilities.” 6. VSLs for Requirement R2, R3 and R4 - There are inconsistencies between the language in Requirement R2, R3 and R4 and the language in the corresponding VSLs that needs to be remedied. For example, Requirement R2 states “the provision of data as described in R1.1-R1.3.” while the VSL states “as described in one of the parts in R.1-R1.4.”
Idaho Power Company	No	No, adding the requirement to assess "modified" facilities seems ambiguous to me. Is changing a transmission structure or replacing a breaker considered a modification? We would not study such replacements. "Upgrades" seems to be a more appropriate term, but this term could still be construed as ambiguous. R5- "Planning Authority" should be modified to "Planning Coordinator," consistent with Applicability section. I do agree that separating R1 into R1-R4 seems reasonable and a cleaner approach to compliance.
Minnkota Power Cooperative	No	R1.2 Which T.O.’s planning criteria apply, the T.O. that received the interconnection request, or the affected system T.O.?R1.4 could be revised for clarity between the assessment and the resulting report. As an example; “Documentation of the study assumptions, alternatives considered, and coordinated recommendations used in the assessment. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.”

Organization	Yes or No	Question 2 Comment
Southern California Edison Company	No	Thank you for adding clarity while removing redundancies. Although SCE agrees with the proposed revisions in FAC-002-2, we feel that a new requirement (R5) needs to be added in order to properly identify the Planning Coordinator's responsibility to coordinate the impact to affected systems. Justification for this recommendation can be found in SCE's comments on FAC-001-2.
Hydro One	No	A. Requirement 1.1 is the repeat of R1 itself and doesn't add any clarity or specificity to "evaluation of reliability impact" which is already required by R1. Requirement 1.1 should be deleted (the phrase "on affected system(s)" could be added to R1.) B. Requirement 1.2, "Evaluation of compliance with applicable NERC Reliability Standards" is too broad. The "applicable NERC Reliability Standards" include all aspects of operation as well as planning, some of which are difficult or impossible for Planning Coordinator and Transmission Planner to evaluate or enforce at the time of connection assessment. Examples are requirements in TOP and PRC standards that are not the PC and TP expertise and applicability. The scope of R1.2 should be limited to only those NERC Reliability Standards that are applicable to PC and TP (mainly the TPL standards).C. At the core of FAC-002, for which PC and TP have direct role, is Requirement 1.3 and it should be given more emphasis, with specific requirement to perform the studies to ensure compliance with TPL standards.
California ISO	No	Comments: Although in general we are supportive of the proposed revisions to FAC-002-2, we have several comments as listed below that we request the SDT to address: • R1 should have an "or" instead of "and" as shown below to be consistent with the terminology used in the VSLs.R1. Each Transmission Planner or each Planning Coordinator shall conduct studies on the reliability impact of integrating new or materially modified generation, transmission, or electricity end-user Facilities.

Organization	Yes or No	Question 2 Comment
		• The Time Horizon for all of the FAC-002-2 Requirements, particularly R1, should include: "Near-term Planning or Long-term Planning"Time Horizon: [Near-term Planning or Long-term Planning] • R1.1 We recommend continuing to use the original terminology of: "interconnected transmission systems" rather than "affected system(s)." The use of the term "affected system(s)" is not clear, as FERC uses the term affected systems as being neighboring systems other than one's own system. • Regarding R1 and R1.1: The obligation to assess and demonstrate reliability impact and performance on the affected system(s) [or interconnected transmission systems] should be placed on the TO/TP of the affected system(s) [or interconnected transmission systems] to study their own system(s) and identify necessary mitigations, with the project proponents themselves (i.e., the GO, TO, DP, or LSE) initiating the interconnection study process with the TO/TP of the affected system(s)." • R1.2 Add: Planning Coordinator planning criteriaR1.2 should include Planning Coordinator planning criteria. The use of the term "regional" is unclear as to whether or not it includes Planning Coordinator planning criteria. We suggest modifying R1.2 to read:R1.2 Evaluation of compliance with applicable NERC Reliability Standards; regional criteria, Planning Coordinator planning criteria, Transmission Owner planning criteria; and Facility interconnection requirements; • For R2-R4, should add: "or materially modify" as in "seeking to interconnect or materially modify generation Facilities" • R2-R4, should add: "including but not limited to the provision of data for the required studies" We suggest modifying the language in R2-R4 to read: Each entity (GO, TO, DP, LSE) seeking to interconnect or materially modify generation Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data for the required studies as described in R1.1-R1.3.

Organization	Yes or No	Question 2 Comment
PacifiCorp	Yes	
FirstEnergy	Yes	
Tennessee Valley Authority	Yes	The formatting of section A.4 - Applicability, needs work: The TP and TO are listed on the same line, 4.1.2. The LSE is rolled into section A.5 - Background. The section A.4, 4.1.2.1 edit should be either "..conduct a study to evaluate the reliability impact..." or " conduct a study on the reliability impact...".We suggest that the proposed R4 become R1 to better bridge from FAC-001 to FAC-002. The premise to the current R1 is that a Transmission Owner or applicable Generator Owner has been approached by another entity to either establish or modify an interconnection Facility. Requirement R1 requires the Transmission Planner and Planning Coordinator to conduct studies. In instances where these entities are not the same, could it be more appropriate for the Transmission Planner to conduct the studies and have the Planning Coordinator review the studies; or by mutual agreement have one or the other perform the studies? If the drafting team agrees, we suggest changing the "and" to "and/or". Also, for clarity we suggest the words "within its planning area" be added at the end of the first sentence. We believe the proposed revision may lack clarity in instances where the Transmission Owner, Transmission Planner and Planning Coordinator are not the same entity. For example, requirements R2 and R3 require entities seeking to interconnect to coordinate and cooperate on studies with the Transmission Planner or Planning Coordinator, presumably after contacting a Transmission Owner. There is no explicit requirement for the Transmission Owner to identify the Transmission Planner or Planning Coordinator that the interconnecting entity needs to work with on the studies. This could be addressed in the FAC-001-2, requirement R3 sub-requirements.
Duke Energy	Yes	Duke Energy suggests a reorganization of the Applicability Section and Background Section due to an apparent clerical error as follows:"4. Applicability:4.1. Functional Entities:4.1.1 Planning Coordinator4.1.2 Transmission Planner 4.1.3Transmission

Organization	Yes or No	Question 2 Comment
		Owner4.1.4 Distribution Provider4.1.5 Generator Owner4.1.6 Applicable Generator Owner4.1.6.1 Generator Owner with an executed Agreement to conduct a study to on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems. 4.1.7 Load-Serving Entity 5. Background: The objective of FAC-002 is to ensure that the entities involved in the integration of new or materially modified Facilities conduct and coordinate studies before any interconnection occurs so that the interconnection is determined to be technically feasible and reliable. This objective supports reliability principle 1, which states that "interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards."
Southern Company: Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing	Yes	a. R1.2. Remove reference to compliance with NERC Reliability Standards and regional and Transmission Owner Planning criteria: Should read "Evaluation of the reliability impacts consistent with the applicable Facility Interconnection Requirements." Reasoning: NERC Reliability Standards are not applicable to the interconnection, yet. Once service is rendered or interconnection made, then there is a firm obligation for which they apply the NERC standards. Also, "NERC Reliability Standards" is too broad and open ended. b. Remove 'cooperate' reference in several locations where it states "coordinate and cooperate ...".Reasoning: Cooperate is redundant since there is already a requirement to "coordinate"(coordinate implies cooperation). c. R1. Add a requirement for the Transmission Owner and/or Transmission Planner to share interconnection study results and generator's commitment to proceed with the Reliability Coordinator. Also include RC as applicable entity. Reasoning: There is currently a reliability gap in coordination of studies between the TP/TO and the RC for interconnection requests. Specifically, in areas where there are several TO's and one RC, the results of an interconnection study and subsequent generators

Organization	Yes or No	Question 2 Comment
		commitment to proceed may not be conveyed to the RC in time for adequate integration and verification prior to the In-Service/Synch/COD.
Arizona Public Service Company	Yes	Although AZPS appreciates the effort to better reflect industry processes, AZPS would like the drafting team to verify that the new requirement will have no impact on the Transmission Planner's processes, including financial elements, for completing the necessary studies as described in the entity's Open Access Transmission Tariff.
SPP Standards Review Group	Yes	Again, while we generally agree with the proposed revisions, we have the following recommendations for the SDT to consider. Delete the 'to' at the end of the first line of Applicability section 4.1.2.1.In Part 1.3 of Requirement R1 insert commas such that the 2nd line reads '...dynamics studies, as necessary, to evaluate...'.Replace 'R1.1 - R1.3' in Requirements R2, R3 and R4 with 'Requirement R1, Parts 1.1 - 1.3'.Replace 'in its studies one of the parts in R1.1 -R1.4.' with 'one of Parts 1.1 through 1.4 in its studies.' at the end of the Lower VSL for R1. Make a similar change in the Moderate and High VSLs for R1.Replace 'in one of the parts in R1 - R1.4.' with 'one of Requirement R1, Parts 1.1 through 1.4.' at the end of the Lower VSL for R2. Make a similar change in the Moderate and High VSLs for R2. Make similar changes in Requirements R3 and R4.
Ingleside Cogeneration LP	Yes	ICLP agrees that splitting Requirement R1 into multiple parts clearly distinguishes the responsibilities of planners and facility owners to interconnection studies. This eliminates any ambiguity in the process - and avoids the possibility of a violation to a missed or improperly executed task that is outside of an entity's control. In addition, ICLP believes that the modifications to FAC-002 are consistent with FAC-001 - which is particularly important in situations where a third party wants to tie into the GO-TO interconnection. Sometimes the Generator Owner can be compelled by the PUC or RTO to allow a third party attachment, which necessitates a follow up agreement to cover costs of studies and so forth. It is important that the third party negotiate the agreement in good faith and not use NERC standards as a means to force compliance.

Organization	Yes or No	Question 2 Comment
		Our reading of both standards indicates that everyone's rights are preserved in the process - a necessary part of well-applied regulatory oversight.
Pepco Holdings Inc.	Yes	
Xcel Energy	Yes	In general, we agree with the revisions to the standard and believe they are moving the standard in the proper direction. Under R1.2, it states ". . .regional and Transmission Owner planning requirements . . ." Typically the Transmission Planner, Planning Coordinator or region would have planning requirements, not the Transmission Owner. For clarity, we believe the works "and Transmission Owner" should be removed from this requirement.
Virginia State Corporation Commission (member, Operating Committee)	Yes	
Kansas City Power & Light	Yes	
Tri-State Generation and Transmission Association, Inc.	Yes	There are some formatting issues in the Applicability and Background sections. "Load-Serving Entity" should be listed next after Generator Owner and Background should be section 5.
Georgia Transmission Corporation	Yes	For R1, GTC would like to suggest changing the word "integrating" to "interconnecting". "Each Transmission Planner and each Planning Coordinator shall conduct studies on the reliability impact of interconnecting new or materially modified....." For R1, part 1.2, GTC would like to suggest eliminating the words "Evaluation of": "Compliance with....." For R1, part 1.4, GTC would like to suggest the following: "Documentation of study assumptions, system performance, alternatives considered, and jointly coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated with the affected entities." For R4, GTC would like to suggest noting specifically that it is a

Organization	Yes or No	Question 2 Comment
		"third party" interconnection and adding the DP and LSE as they could also have a third party request: Each Transmission Owner, each Distribution Provider, each Load Serving Entity, and each applicable Generator Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding third party requested interconnections to its Facilities, including but not limited to the provision of data as described in R1.1-R1.3.
Exelon	Yes	Applicability: Formatting problems:4.1.2. Separate Transmission Planner and Transmission Owner Is the LSE an applicable entity? In which case it should be 4.1.7.Section 5 Background is not formatted properly, separate it from LSE.Requirements:R1.2. elements of a study shall include, "regional and Transmission Owner planning criteria; and Facility interconnection requirements;" Please clarify use of regional. Should this say regional and or TO planning criteria and facility interconnection requirements? There are two other items we would recommend the Standard Drafting Team consider. First, for requirement R3 in the revised draft of FAC-002, we recommend that additional wording be added to allow handling the addition of smaller end-user loads to the transmission system through the normal annual reliability analysis performed by the Planning Authority or Planning Coordinator. We would recommend this for loads smaller than 20 MW. This would clarify that for these smaller end-user loads, it is not necessary for coordination to occur individually for each instance, but rather can be consolidated into the annual reliability analysis. We believe this is the most effective way to handle these smaller end-use additions. Second. We think R1.1 and R1.2 are redundant and could be combined. See also "Consideration of Issues" document, where it states, " Further, the SDT has proposed deleted (sic) any reference to TPL standards because it is redundant with the FAC-002-2, R1.2 requirement to evaluate compliance with all NERC Reliability Standards. To continue including a separate reference to TPL Reliability Standards is redundant and could lead to double jeopardy." Removing reference to the TPL standards and keeping the "NERC Reliability Standards" reference seems to only partially address the issue identified by the SDT, we question

Organization	Yes or No	Question 2 Comment
		whether a requirement should say evaluate compliance with other applicable Standards.
Oncor Electric Delivery	Yes	
David Kiguel	Yes	
Wisconsin Electric	Yes	• Splitting the current R1 into 3 separate requirements adds clarity to the actual duties and responsibilities associated with interconnecting new Facilities. • Deleting R2 due to paragraph 81 considerations is also very appropriate. • Our only concern with the new revised standard is that the term "Applicable Generator Owner" used in the new requirement R4 needs to be more clearly defined. We recommend modifying the definition of the term (or in some other place if that would be more appropriate) to include example(s) of where/how this might apply; e.g. "... Applicable GOs are those whose generator interconnections to the transmission system have been deemed 'Transmission Elements' and who have 3rd parties seeking to interconnect to those Transmission Elements. In these situations, these GOs take on the responsibility normally assigned to the TOs to ensure these new facilities meet all the interconnection requirements specified by the NERC standards."
Northeast Utilities	Yes	suggest capitalizing "Applicable Generator Owner" throughout the standard (background and requirements)R1.1, R1.2, R1.3 seem to be duplicative. Evidence presented to show compliance would be identical for these 3 requirements.
City of Tacoma - Tacoma Power	Yes	
HHWP	Yes	The background section includes the language, "This objective supports reliability principle 1", without any indication of the policy or document that this "reliability principle 1" is part of. This reference to "reliability principle 1" should be changed to

Organization	Yes or No	Question 2 Comment
		make clear what body of policy it comes from. Requirement R2 states that "Each Generator Owner ... shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator". It is recommended that the word "its" be replaced with "the appropriate". This recommendation is based on the observation that may GO's are working within multiple TP and PC areas.
Colorado Springs Utilities		
DTE Electric		DTE's Operational & Planning Engineering recommends changing all instances of "Planning Coordinator" to "Transmission Planning Coordinator" for needed clarity.

3. Do you agree with the timeline for implementation as proposed in the Implementation Plan

Summary Consideration:

The Implementation Plan received substantial support; therefore, the SDT has not modified the Implementation Plan with the exception of the incorporation of non-substantive changes to the language of FAC-001-2 and FAC-002-2.

Organization	Yes or No	Question 3 Comment
ACES Standards Collaborators	No	We believe the implementation plan should be modified to reflect the complete retirement of these standards based on the reasons stated in questions 1 and 2.Thank you for the opportunity to comment.
Kansas City Power & Light	No	
Modesto Irigation District	No	I am voting NO on the proposed revisions to both standards for the following reasons: 1, FAC-002-2 refers to its applicability to the BES, while FAC-001-1 does not mention being applicable to the BES at all, yet the two standards are a pair that are interdependent. This will lead to confusion and mis-application of these two standards by NERC members. 2. In FAC-002-2 in section 1.4 (proposed 1.3), deleting the specific requirements to perform steady-state and dynamics studies in accordance with NERC TPL-001 through TPL-003 is a mistake. We would be changing from very specific and good requirements, to no specific requirements at all. 3. In FAC-002-2 in section 5 (Background), it is confusing to use the term “interconnected bulk power system” if what is meant is the BES. Otherwise, they should define what they specifically mean by “interconnected bulk power system”.

Organization	Yes or No	Question 3 Comment
		4. Also, in general, the proposed changes for FAC-001-1, with the exception of the first two under Purpose and Background, actually de-clarify the requirements instead of clarifying them. Thanks. Sincerely, Spencer Tacke MID
Response: The SDT has addressed your comments above, under the Question 2 responses on FAC-002-2 comments.		
Dominion	Yes	
Northeast Power Coordinating Council	Yes	
NCPA Generation	Yes	
PacifiCorp	Yes	
MRO NERC Standards Review Forum	Yes	
FirstEnergy	Yes	FirstEnergy does anticipate some procedural revisions for which one year is appreciated.
DTE Electric	Yes	
Tennessee Valley Authority	Yes	
Duke Energy	Yes	Duke Energy agrees with the proposed Implementation Plan.
Florida Municipal Power Agency	Yes	
Southern Company: Southern Company Services, Inc.;	Yes	

Organization	Yes or No	Question 3 Comment
Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing		
Florida Power & Light	Yes	Assuming that FAC-002-1 is revised to further clarify.
ISO/RTO Council Standards Review Committee	Yes	
Arizona Public Service Company	Yes	
SPP Standards Review Group	Yes	
Rayburn Country Electric Cooperative	Yes	
Dynegy	Yes	
Manitoba Hydro	Yes	
Ameren	Yes	
Ingleside Cogeneration LP	Yes	

Organization	Yes or No	Question 3 Comment
Independent Electricity System Operator	Yes	
Pepco Holdings Inc.	Yes	
Virginia State Corporation Commission (member, Operating Committee)	Yes	
Tri-State Generation and Transmission Association, Inc.	Yes	
Georgia Transmission Corporation	Yes	
American Electric Power	Yes	
American Transmission Company, LLC	Yes	
Exelon	Yes	
Oncor Electric Delivery	Yes	
David Kiguel	Yes	
Wisconsin Electric	Yes	
Idaho Power Company	Yes	
Northeast Utilities	Yes	

Organization	Yes or No	Question 3 Comment
Minnkota Power Cooperative	Yes	
Southern California Edison Company	Yes	
California ISO	Yes	
City of Tacoma - Tacoma Power	Yes	
HHWP	Yes	

END OF REPORT

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment (December 18, 2013-January 17, 2014)
2. SC authorized moving the SAR forward to standard development (March 31, 2013)
3. 45-day Formal Comment Period with Parallel Initial Ballot (April 1-May 15, 2014)

Description of Current Draft

Anticipated Actions	Anticipated Date
Final Ballot	June 2014
BOT Adoption	August 2014

Effective Date

The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
1		Added requirements for Generator Owner and brought overall standard format up to date.	Revision under Project 2010-07
1	February 9, 2012	Adopted by the Board of Trustees	
1	September 19, 2013	A FERC order was issued on September 19, 2013, approving FAC-001-1. This standard became enforceable on November 25, 2013 for Transmission Owners. For Generator Owners, the standard becomes enforceable on January 1, 2015.	
2		Revisions to implement the recommendations of the FAC Five-Year Review Team.	Revision under Project 2010-02

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

When this standard has received ballot approval, the text boxes will be moved to the Application Guidelines Section of the Standard.

A. Introduction

1. Title: **Facility Interconnection Requirements**

2. Number: FAC-001-2

3. Purpose: To avoid adverse impacts on the reliability of the Bulk Electric System, Transmission Owners and applicable Generator Owners must document and make Facility interconnection requirements available so that entities seeking to interconnect will have the necessary information.

4. Applicability:

4.1. Functional Entities:

4.1.1 Transmission Owner

4.1.2 Applicable Generator Owner

4.1.2.1 Generator Owner with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.

5. Background:

B. Requirements and Measures

R1. Each Transmission Owner shall document Facility interconnection requirements, update them as needed, and make them available upon request. Each Transmission Owner's Facility interconnection requirements shall address interconnection requirements for: *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*

1.1. generation Facilities;

1.2. transmission Facilities; and

1.3. end-user Facilities.

M1. Each Transmission Owner shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R1.

R2. Each applicable Generator Owner shall document Facility interconnection requirements and make them available upon request within 45 calendar days of full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is

used to interconnect to the Transmission system. *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*

M2. Each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R2.

R3. Each Transmission Owner shall address the following items in its Facility interconnection requirements: *[Violation Risk Factor: Lower] [Time Horizon: Long-Term Planning]*

3.1. Procedures for coordinated studies of new or materially modified existing interconnections and their impacts on affected system(s).

3.2. Procedures for notifying those responsible for the reliability of affected system(s) of new or materially modified existing interconnections.

M3. Each Transmission Owner shall have evidence (such as dated, documented Facility interconnection requirements addressing the procedures) that it met all requirements in Requirement R3.

R4. Each applicable Generator Owner shall address the following items in its Facility interconnection requirements: *[Violation Risk Factor: Lower] [Time Horizon: Long-Term Planning]*

4.1. Procedures for coordinated studies of new interconnections and their impacts on affected system(s).

4.2. Procedures for notifying those responsible for the reliability of affected system(s) of new interconnections.

M4. Each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements addressing the procedures) that it met all requirements in Requirement R4.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention

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

The Transmission Owner and applicable Generator Owner shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The responsible entities shall retain documentation as evidence for three years.

If a responsible entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audit

Self-Certification

Spot Check

Compliance Investigation

Self-Reporting

Complaint

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Lower	N/A	The Transmission Owner documented Facility interconnection requirements and updated them as needed, but failed to make them available upon request. OR The Transmission Owner documented Facility interconnection requirements and made them available upon request, but failed to update them as needed. OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but	The Transmission Owner documented Facility interconnection requirements, but failed to update them as needed and failed to make them available upon request. OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for two of the Facilities as specified in R1, Parts 1.1, 1.2, or 1.3.	The Transmission Owner did not document Facility interconnection requirements.

				failed to address interconnection requirements for one of the Facilities as specified in R1, Parts 1.1, 1.2, or 1.3.		
R2	Long-term Planning	Lower	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 45 calendar days but less than or equal to 60 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 60 calendar days but less than or equal to 70 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 70 calendar days but less than or equal to 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.

R3	Long-term Planning	Lower	N/A	N/A	The Transmission Owner addressed either R3, Part 3.1 or Part 3.2 in its Facility interconnection requirements, but did not address both.	The Transmission Owner addressed neither R3, Part 3.1 nor Part 3.2 in its Facility interconnection requirements.
R4	Long-term Planning	Lower	N/A	N/A	The applicable Generator Owner addressed either R4, Part 4.1 or Part 4.2 in its Facility interconnection requirements, but did not address both.	The applicable Generator Owner addressed neither R4, Part 4.1 nor Part 4.2 in its Facility interconnection requirements.

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Guidelines and Technical Basis

Entities should have documentation to support the technical rationale for determining whether an existing interconnection was "materially modified." Recognizing that what constitutes a "material modification" will vary from entity to entity, the intent is for this determination to be based on engineering judgment.

Requirement R3:

Originally the Parts of R3, with the exception of the first two bullets, which were added by the Project 2010-02 drafting team, this list has been moved to the Guidelines and Technical Basis section to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as Parts of R3 was deemed too prescriptive, as frequently some items in the list do not apply to all applicable entities – and some applicable entities will have requirements that are not included in this list.

Each Transmission Owner and applicable Generator Owner should consider the following items in the development of Facility interconnection requirements:

- Procedures for requesting a new Facility interconnection or material modification to an existing interconnection
- Data required to properly study the interconnection
- Voltage level and MW and MVAR capacity or demand at the point of interconnection
- Breaker duty and surge protection
- System protection and coordination
- Metering and telecommunications
- Grounding and safety issues
- Insulation and insulation coordination
- Voltage, Reactive Power (including specifications for minimum static and dynamic reactive power requirements), and power factor control
- Power quality impacts
- Equipment ratings
- Synchronizing of Facilities
- Maintenance coordination
- Operational issues (abnormal frequency and voltages)
- Inspection requirements for new or materially modified existing interconnections

- Communications and procedures during normal and emergency operating conditions

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment (December 18, 2013-January 17, 2014)
2. SC authorized moving the SAR forward to standard development (March 31, 2013)
2.3.45-day Formal Comment Period with Parallel Initial Ballot (April 1-May 15, 2014)

Description of Current Draft

Anticipated Actions	Anticipated Date
45-day Formal Comment Period with Parallel Initial Ballot	April 2014
45-day Formal Comment Period with Parallel Additional Ballot	June 2014
Final Ballot	July June 2014
BOT Aadoption	August 2014

Effective Date

The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
1		Added requirements for Generator Owner and brought overall standard format up to date.	Revision under Project 2010-07
1	February 9, 2012	Adopted by the Board of Trustees	
1	September 19, 2013	A FERC order was issued on September 19, 2013, approving FAC-001-1. This standard ~~becomes~~ became enforceable on November 25, 2013 for Transmission Owners. For Generator Owners, the standard becomes enforceable on January 1, 2015.	
2		Revisions to implement the recommendations of the FAC Five-Year Review Team.	Revision under Project 2010-02

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

When this standard has received ballot approval, the text boxes will be moved to the Application Guidelines Section of the Standard.

A. Introduction

1. **Title:** **Facility Interconnection Requirements**

2. **Number:** FAC-001-2

3. **Purpose:** To avoid adverse impacts on the reliability of the Bulk Electric System, ~~ensure that~~Transmission Owners and applicable Generator Owners must document and make Facility interconnection requirements available so that ~~Facilities~~ entities seeking to interconnect~~ion~~ will have the necessary information~~ necessary for considering and pursuing that interconnection~~.

4. **Applicability:**

   4.1. Functional Entities:

   4.1.1 Transmission Owner

   4.1.2 Applicable Generator Owner

   4.1.2.1 Generator Owner with a~~n~~ fully executed Agreement to conduct a study ~~to~~ on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the ~~interconnected~~ Transmission system~~s~~.

Rationale for Changes: "Fully" was added for consistency with R2. "Interconnected Transmission systems" was changed to "Transmission system" here and in R2. "Interconnected Transmission systems" was only used for conformance with language in FAC-002-1 that is no longer used in the proposed FAC-002-2.

5. **Background:**

~~The objective of FAC-001 is to ensure that Transmission Owners and applicable Generator Owners document Facility interconnection requirements so that Facilities seeking interconnection will have the information necessary for considering and pursuing that interconnection. This objective supports reliability principle 3, which states that "information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably."~~

B. Requirements and Measures

R1. Each Transmission Owner shall document Facility interconnection requirements, update them as needed, and make them available upon request. Each Transmission Owner's Facility interconnection requirements shall address interconnection requirements for: *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*

1.1. g~~G~~eneration Facilities;

1.2. t~~T~~ransmission Facilities; and

1.3. e~~E~~nd-user Facilities.

Rationale for Changes: The first words in the Parts of R1 were made lowercase to make clear that they are not references to the NERC Glossary of Terms.

Throughout the standard, the term "interconnection" is deliberately lowercase and does not refer to the term "Interconnection" as used in the NERC Glossary of Terms.

M1. Each Transmission Owner shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R1.

R2. Each applicable Generator Owner shall~~, within 45 days of full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems,~~ document Facility interconnection requirements and make them available upon request within 45 calendar days of full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system. *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*

Rationale for Changes: To ensure that the "what" of the requirement – the action required – is clear, the SDT moved the phrase that begins with "within 45 days…" to the end of the requirement. "Calendar" was added between "45" and "days," as was the intention of the SDT (already reflected in the VSLs), and "interconnected Transmission systems" was changed to "Transmission system" for conformance with the Applicability section.

M2. Each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R2.

R3. Each Transmission Owner ~~and each applicable Generator Owner~~ shall address the following items in its Facility interconnection requirements: *[Violation Risk Factor: Lower] [Time Horizon: Long-Term Planning]*

Rationale for Changes: Similar to the change in R2, the SDT rearranged the words in Part 3.2 for clarity, without changing the meaning of the requirement. Requirements for applicable Generator Owners have been moved to a separate requirement, R4.

While the SDT believes that in the Parts, materially modified "Facilities," "interconnections," or "interconnected Facilities" would refer to the same thing, it believes that referring to materially modified existing interconnections is most clear in this context.

3.1. Procedures for coordinated studies of new or materially modified ~~Facilities~~ existing interconnections and their impacts on affected system(s).

3.2. Procedures for notifying~~ication~~ those responsible for the reliability of affected system(s) of new or materially modified ~~Facilities~~existing interconnections. ~~to those responsible for the reliability of affected system(s).~~

M3. Each Transmission Owner ~~and each applicable Generator Owner~~ shall have evidence (such as dated, documented Facility interconnection requirements addressing the procedures) that it met all requirements in Requirement R3.

R4. Each applicable Generator Owner shall address the following items in its Facility interconnection requirements: *[Violation Risk Factor: Lower] [Time Horizon: Long-Term Planning]*

Rationale for Changes: Applicable Generator Owners were previously included in R3, but have been separated into a different requirement to make clearer that applicable Generator Owners need not be concerned with addressing materially modified interconnections. Otherwise, the requirements for both Transmission Owners and applicable Generator Owners remain exactly the same.

4.1. Procedures for coordinated studies of new interconnections and their impacts on affected system(s).

4.2. Procedures for notifying those responsible for the reliability of affected system(s) of new interconnections.

M4. Each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements addressing the procedures) that it met all requirements in Requirement R4.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention

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

The Transmission Owner and applicable Generator Owner shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The responsible entities shall retain documentation as evidence for three years.

If a responsible entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audit

Self-Certification

Spot Check

Compliance Investigation

Self-Reporting

Complaint

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Lower	N/A	The Transmission Owner documented Facility interconnection requirements and updated them as needed, but failed to make them available upon request. OR The Transmission Owner documented Facility interconnection requirements and made them available upon request, but failed to update them as needed. OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but	The Transmission Owner documented Facility interconnection requirements, but failed to update them as needed and failed to make them available upon request. OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for two of the Facilities as specified in R1, Parts ~~R~~1.1, ~~R~~1.2, or ~~R~~1.3.	The Transmission Owner did not document Facility interconnection requirements.

				failed to address interconnection requirements for one of the Facilities as specified in R1, Parts ~~R~~1.1, ~~R~~1.2, or ~~R~~1.3.		
R2	Long-term Planning	Lower	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 45 calendar days but less than or equal to 60 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the ~~interconnected~~ Transmission system~~s~~.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 60 calendar days but less than or equal to 70 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the ~~interconnected~~ Transmission system~~s~~.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 70 calendar days but less than or equal to 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the ~~interconnected~~ Transmission system~~s~~.	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the ~~interconnected~~ Transmission system~~s~~.

R3	Long-term Planning	Lower	N/A	N/A	The Transmission Owner ~~or applicable Generator Owner~~ addressed either R3, Part ~~R~~3.1 or Part ~~R~~3.2 in its Facility interconnection requirements, but did not address both.	The Transmission Owner ~~or applicable Generator Owner~~ addressed neither R3, Part ~~R~~3.1 nor Part ~~R~~3.2 in its Facility interconnection requirements.
R4	Long-term Planning	Lower	N/A	N/A	The applicable Generator Owner addressed either R4, Part 4.1 or Part 4.2 in its Facility interconnection requirements, but did not address both.	The applicable Generator Owner addressed neither R4, Part 4.1 nor Part 4.2 in its Facility interconnection requirements.

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Guidelines and Technical Basis

Entities should have documentation to support the technical rationale for determining whether an existing ~~Facility~~ interconnection was "materially modified." Recognizing that what constitutes a "material modification" will vary from entity to entity, the intent is for this determination to be based on engineering judgment.

Requirement R3:

Originally the P~~subp~~arts of R3, with the exception of the first two bullets, which were added by the Project 2010-02 drafting team, this list has been moved to the Guidelines and Technical Basis section to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as P~~subp~~arts of R3 was deemed too prescriptive, as frequently some items in the list ~~will~~ do not apply to all applicable entities – and some applicable entities will have requirements that ~~expand upon~~ are not included in this list.

Each Transmission Owner and applicable Generator Owner should consider the following items in the development of Facility interconnection requirements:

- Procedures for requesting a new Facility interconnection or material modification to an existing interconnection
- Data required to properly study the ~~new~~ interconnection
- Voltage level and MW and MVAR capacity or demand at the point of interconnection
- Breaker duty and surge protection
- System protection and coordination
- Metering and telecommunications
- Grounding and safety issues
- Insulation and insulation coordination
- Voltage, Reactive Power (including specifications for minimum static and dynamic reactive power requirements), and power factor control
- Power quality impacts
- Equipment ratings
- Synchronizing of Facilities
- Maintenance coordination

- Operational issues (abnormal frequency and voltages)
- Inspection requirements for ~~existing or~~ new or materially modified existing ~~Facilities~~interconnections
- Communications and procedures during normal and emergency operating conditions

~~The Transmission Owner's or applicable Generator Owner's Facility interconnection requirements should ensure that by the time of interconnection, the interconnecting Facility will be able to comply with all applicable NERC Reliability Standards.~~

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment (~~Dates of posting).~~December 18, 2013-January 17, 2014)
2. SC authorized moving the SAR forward to standard development (~~SC meeting date when authorized).~~March 31, 2013)
3. 45-day Formal Comment Period with Parallel Initial Ballot (April 1-May 15, 2014)

Description of Current Draft

~~(Describe the type of action associated with this posting such as 30-day informal comment period, 30-day formal comment period, 45-day formal comment period with parallel initial ballot, 30-day formal comment period with parallel successive ballot, recirculation ballot)~~

Anticipated Actions	Anticipated Date
~~30-day Formal Comment Period~~	
~~45-day Formal Comment Period with Parallel Initial Ballot~~Final Ballot	June 2014
~~30-day Formal Comment Period with Parallel Successive Ballot~~	
~~Recirculation ballot~~	
BOT ~~a~~Adoption	August 2014

Effective Date~~s~~

~~In those jurisdictions where regulatory approval is required, all requirements applied to the Transmission Owner become effective upon regulatory approval. In those jurisdictions where no regulatory approval is required, all requirements applied to the Transmission Owner and Regional Entity become effective upon Board of Trustees' adoption.~~

~~In those jurisdictions where regulatory approval is required, all requirements applied to the Generator Owner become effective on the~~The first ~~calendar~~ day of the first calendar quarter that is one year after the date ~~of the order approving the~~that this standard ~~from~~is approved by an applicable ~~regulatory authorities. In those jurisdictions where no regulatory approval~~governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, ~~all requirements applied to~~ the ~~Generator Owner~~standard shall become effective on the first ~~calendar~~ day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of ~~Trustees' adoption.~~Trustees or as otherwise provided for in that jurisdiction.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
1		Added requirements for Generator Owner and brought overall standard format up to date.	Revision under Project 2010-07
1	February 9, 2012	Adopted by the Board of Trustees	
1	September 19, 2013	A FERC order was issued on September 19, 2013, approving FAC-001-1. This standard bec~~o~~ame~~s~~ enforceable on November 25, 2013 for Transmission Owners. For Generator Owners, the standard becomes enforceable on January 1, 2015.	
2		Revisions to implement the recommendations of the FAC Five-Year Review Team.	Revision under Project 2010-02

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

~~**Term:** definition~~None.

When this standard has received ballot approval, the text boxes will be moved to the Application Guidelines Section of the Standard.

A. Introduction

1. **Title:** **Facility ~~C~~Interconnection Requirements**

2. **Number:** FAC-001-~~1~~2

3. **Purpose:** To avoid adverse impacts on the reliability of the Bulk Electric System, Transmission Owners and applicable Generator Owners must ~~establish~~document and make Facility ~~connection and performance~~interconnection requirements~~.~~ available so that entities seeking to interconnect will have the necessary information.

4. **Applicability:**

   4.1. Functional Entities:

   4.1.1 Transmission Owner

   4.1.2 Applicable Generator Owner

   4.1.2.1 Generator Owner with ~~an~~ a fully executed Agreement to ~~evaluate~~ conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the ~~interconnected~~ Transmission system~~s~~.

~~**5. Background:**~~

~~Text~~

~~B. Requirements and Measures~~

~~**R1.** The Transmission Owner shall document, maintain, and publish Facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements. The Transmission Owner's Facility connection requirements shall address connection requirements for: *[Violation Risk Factor: Medium] [Time Horizon:]*~~

~~Rationale for R1:~~

~~**1.1.** Generation Facilities,~~

~~**1.2.** Transmission Facilities,~~

~~**1.3.** End-user Facilities~~

~~**M1.** The Transmission Owner shall make available (to its Compliance Enforcement Authority) evidence that it met all the requirements stated in Requirement R1.~~

~~5.1.1.1~~4.1.2.2 ~~Each applicable Generator Owner shall, within 45 days of having an executed Agreement to evaluate the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems (under FAC-002-1), document and publish its Facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements. *[Violation Risk Factor: Medium] [Time Horizon:]*~~

~~Rationale for R2:~~

5. ~~Text Each Generator Owner that has an executed Agreement to evaluate~~**Background:**

B. Requirements and Measures

R1. Each Transmission Owner shall document Facility interconnection requirements, update them as needed, and make them available upon request. Each Transmission Owner's Facility interconnection requirements shall address interconnection requirements for: *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*

1.1. generation Facilities;

1.2. transmission Facilities; and

1.3. end-user Facilities.

M1. Each Transmission Owner shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R1.

R2. Each applicable Generator Owner shall document Facility interconnection requirements and make them available upon request within 45 calendar days of full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the ~~interconnected Transmission systems shall make available (to its Compliance Enforcement Authority) evidence that it met all requirements stated in Requirement R2.~~ Transmission system. *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*

M2. Each ~~Transmission Owner and each~~ applicable Generator Owner ~~(in accordance with Requirement R2)~~ shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R2.

~~Rationale for R3:~~

R3. Each Transmission Owner shall address the following items in its Facility interconnection requirements: *[Violation Risk Factor: ~~Medium~~Lower] [Time Horizon: Long-Term Planning]*

~~**3.1.** Provide a written summary of its plans to achieve the required system performance as described in Requirements R1 or R2 throughout the planning horizon:~~

~~**3.1.1.**~~ Procedures for coordinated ~~joint~~ studies of new ~~Facilities and their impacts on the interconnected Transmission systems.~~

~~**3.1.2.** Procedures for notification of new or~~ or materially modified ~~Facilities to others (those responsible for the reliability of the interconnected Transmission systems) as soon as feasible.~~

~~**3.1.3.** Voltage level and MW and MVAR capacity or demand at point of connection.~~

~~**3.1.4.** Breaker duty and surge protection.~~

~~**3.1.5.** System protection and coordination.~~

~~**3.1.6.** Metering and telecommunications.~~

~~**3.1.7.** Grounding and safety issues.~~

~~**3.1.8.** Insulation and insulation coordination.~~

~~**3.1.9.** Voltage, Reactive Power, and power factor control.~~

~~**3.1.10.** Power quality impacts.~~

~~**3.1.11.** Equipment Ratings.~~

~~**3.1.12.** Synchronizing of Facilities.~~

~~**3.1.13.** Maintenance coordination.~~

~~**3.1.14.** Operational issues (abnormal frequency and voltages).~~

~~**3.2.**~~**3.1.** ~~Inspection requirements for~~ existing ~~or new Facilities.~~interconnections and their impacts on affected system(s).

~~**3.2.1.** Communications and procedures during normal and emergency operating conditions.~~

3.2. Procedures for notifying those responsible for the reliability of affected system(s) of new or materially modified existing interconnections.

~~**M2.**~~ Each Transmission Owner ~~and each applicable Generator Owner (in accordance with Requirement R2) shall make available (to its Compliance Enforcement Authority) evidence that it met all requirements stated in Requirement R3.~~

~~**R4.** The Transmission Owner~~ shall ~~maintain and update its~~have evidence (such as dated, documented Facility interconnection requirements ~~as required. The Transmission Owner shall make documentation of these requirements available to the users of the transmission system, the Regional Entity, and ERO on request (five business days). *[Violation Risk Factor: Medium] [Time Horizon:]*~~

~~Rationale for R4:~~

M3. ~~The Transmission Owner shall make available (to its Compliance Enforcement Authority) evidence~~ addressing the procedures) that it met all ~~the~~requirements in Requirement R3.

R4. Each applicable Generator Owner shall address the following items in its Facility interconnection requirements ~~stated~~: *[Violation Risk Factor: Lower] [Time Horizon: Long-Term Planning]*

4.1. Procedures for coordinated studies of new interconnections and their impacts on affected system(s).

4.2. Procedures for notifying those responsible for the reliability of affected system(s) of new interconnections.

~~**M3.**~~**M4.** Each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements addressing the procedures) that it met all requirements in Requirement R4.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention

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

The ~~Reliability Coordinator and~~ Transmission ~~Operator~~Owner and applicable Generator Owner shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The responsible entities shall retain documentation as evidence for three years.

If a responsible entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audit

Self-Certification

Spot Check

Compliance Investigation

Self-Reporting

Complaint

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	~~Medium~~Lower	~~Not Applicable.~~N/A	The Transmission Owner ~~failed to do one of the following:~~ ~~Document or maintain or publish~~documented Facility interconnection requirements ~~as specified in the Requirement~~and updated them as needed, but failed to make them available upon request. OR ~~Failed~~The Transmission Owner documented Facility interconnection requirements and made them available upon request, but failed to ~~include~~update them as needed.	The Transmission Owner documented Facility interconnection requirements, but failed to ~~do one~~update them as needed and failed to make them available upon request. OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for two of the ~~following:~~ ~~Failed to include (2) of the components~~Facilities	The Transmission Owner did not ~~develop~~document Facility interconnection requirements.

				OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for one ~~(1)~~ of the ~~components~~Facilities as specified in R1, Parts 1.1, ~~R1~~1.2, or ~~R1~~1.3.	as specified in R1~~.~~, Parts 1~~, R1~~.1, 1.2, or ~~R1.3~~ ~~OR~~ ~~Failed to document or maintain or publish its Facility connection requirements as specified in the Requirement and failed to include one (1) of the components as specified in R1.1, R1.2 or R1~~1.3.	
R2	Long-term Planning	~~Medium~~Lower	The applicable Generator Owner failed to document ~~and publish~~ Facility interconnection requirements and make them available upon request until more than 45 calendar days but less than or equal to 60 calendar days after ~~having~~full execution of an Agreement to	The applicable Generator Owner failed to document ~~and publish~~ Facility interconnection requirements and make them available upon request until more than 60 calendar days but less than or equal to 70 calendar days after ~~having~~full execution of an Agreement to ~~evaluate~~conduct a	The applicable Generator Owner failed to document ~~and publish~~ Facility interconnection requirements and make them available upon request until more than 70 calendar days but less than or equal to 80 calendar days after ~~having~~full execution of an Agreement to ~~evaluate~~conduct a	The applicable Generator Owner failed to document ~~and publish~~ Facility interconnection requirements and make them available upon request until more than 80 calendar days after ~~having~~full execution of an Agreement to ~~evaluate~~conduct a study on the reliability impact of

			~~evaluate~~conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the ~~interconnected~~ Transmission system~~s~~.	study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the ~~interconnected~~ Transmission system~~s~~.	study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the ~~interconnected~~ Transmission system~~s~~.	interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the ~~interconnected~~ Transmission system~~s~~.
R3	Long-term Planning	~~Medium~~Lower	~~The responsible entity's Facility connection requirements failed to address one of the parts listed in Requirement R3, parts 3.1.1 through 3.1.16.~~N/A	~~The responsible entity's Facility connection requirements failed to address two of the parts listed in Requirement R3, parts 3.1.1 through 3.1.16.~~N/A	The ~~responsible entity's~~Transmission Owner addressed either R3, Part 3.1 or Part 3.2 in its Facility interconnection requirements~~ failed to~~, but did not address ~~three of the parts listed in Requirement R3, parts 3.1.1 through 3.1.16~~both.	The ~~responsible entity's~~Transmission Owner addressed neither R3, Part 3.1 nor Part 3.2 in its Facility interconnection requirements~~ failed to address four or more of the parts listed in Requirement R3, parts 3.1.1 through 3.1.16.~~ .

R4	Long-term Planning	~~Medium~~Lower	~~The responsible entity made the requirements available more than five business days but less than or equal to 10 business days after a request.~~N/A	~~The responsible entity made the requirements available more than 10 business days but less than or equal to 20 business days after a request.~~N/A	~~The responsible entity made the requirements available more than 20 business days less than or equal to 30 business days after a request.~~The applicable Generator Owner addressed either R4, Part 4.1 or Part 4.2 in its Facility interconnection requirements, but did not address both.	~~The responsible entity made the requirements available more than 30 business days after a request.~~The applicable Generator Owner addressed neither R4, Part 4.1 nor Part 4.2 in its Facility interconnection requirements.

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Guidelines and Technical Basis

~~**Requirement R1:**~~

~~**Requirement R2:**~~

Entities should have documentation to support the technical rationale for determining whether an existing interconnection was "materially modified." Recognizing that what constitutes a "material modification" will vary from entity to entity, the intent is for this determination to be based on engineering judgment.

Requirement R3:

Originally the Parts of R3, with the exception of the first two bullets, which were added by the Project 2010-02 drafting team, this list has been moved to the Guidelines and Technical Basis section to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as Parts of R3 was deemed too prescriptive, as frequently some items in the list do not apply to all applicable entities – and some applicable entities will have requirements that are not included in this list.

Each Transmission Owner and applicable Generator Owner should consider the following items in the development of Facility interconnection requirements:

- Procedures for requesting a new Facility interconnection or material modification to an existing interconnection
- Data required to properly study the interconnection
- Voltage level and MW and MVAR capacity or demand at the point of interconnection
- Breaker duty and surge protection
- System protection and coordination
- Metering and telecommunications
- Grounding and safety issues
- Insulation and insulation coordination
- Voltage, Reactive Power (including specifications for minimum static and dynamic reactive power requirements), and power factor control

- Power quality impacts
- Equipment ratings
- Synchronizing of Facilities
- Maintenance coordination
- Operational issues (abnormal frequency and voltages)
- Inspection requirements for new or materially modified existing interconnections
- Communications and procedures during normal and emergency operating conditions

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment (December 18, 2013-January 17, 2014).
2. SC authorized moving the SAR forward to standard development (March 31, 2014)
3. 45-day Formal Comment Period with Parallel Initial Ballot (April 1-May 15, 2014)

Description of Current Draft

Anticipated Actions	Anticipated Date
45-day Formal Comment Period with Parallel Initial Ballot	April 2014
Final Ballot	June 2014
BOT Adoption	August 2014

Effective Dates

The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	January 13, 2006	Removed duplication of "Regional Reliability Organizations(s).	Errata
1	August 5, 2010	Modified to address Order No. 693 Directives contained in paragraph 693. Adopted by the NERC Board of Trustees.	Revised
1	February 7, 2013	R2 and associated elements approved by NERC Board of Trustees for retirement as part of the Paragraph 81 project (Project 2013-02) pending applicable regulatory approval.	
1	November 21, 2013	R2 and associated elements approved by FERC for retirement as part of the Paragraph 81 project (Project 2013-02)	
2		Revisions to implement the recommendations of the FAC Five-Year Review Team.	Revision under Project 2010-02

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

When this standard has received ballot approval, the text boxes will be moved to the Application Guidelines Section of the Standard.

A. Introduction

1. Title: **Facility Interconnection Studies**

2. Number: FAC-002-2

3. Purpose: To study the impact of interconnecting new or materially modified Facilities on the Bulk Electric System.

4. Applicability:

4.1. Functional Entities:

4.1.1 Planning Coordinator

4.1.2 Transmission Planner

4.1.3 Transmission Owner

4.1.4 Distribution Provider

4.1.5 Generator Owner

4.1.6 Applicable Generator Owner

4.1.6.1 Generator Owner with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.

4.1.7 Load-Serving Entity

5. Background:

B. Requirements and Measures

R1. Each Transmission Planner and each Planning Coordinator shall study the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities. The following shall be studied: *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

1.1. The reliability impact of the new interconnection, or materially modified existing interconnection, on affected system(s);

1.2. Adherence to applicable NERC Reliability Standards; regional and Transmission Owner planning criteria; and Facility interconnection requirements;

1.3. Steady-state, short-circuit, and dynamics studies, as necessary, to evaluate system performance under both normal and contingency conditions; and

1.4. Study assumptions, system performance, alternatives considered, and coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.

M1. Each Transmission Planner or each Planning Coordinator shall have evidence (such as study reports, including documentation of reliability issues) that it met all requirements in Requirement R1.

R2. Each Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M2. Each Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R2.

R3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R3.

R4. Each Transmission Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested new or materially modified interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M4. Each Transmission Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R4.

R5. Each applicable Generator Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M5. Each applicable Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R5.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention

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

The Planning Coordinator, Transmission Planner, Transmission Owner, Distribution Provider, Generator Owner, applicable Generator Owner, and Load-Serving Entity shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The responsible entities shall retain documentation as evidence for three years.

If a responsible entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audit

Self-Certification

Spot Check

Compliance Investigation

Self-Reporting

Complaint

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Medium	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities, but failed to study one of the Parts (R1, 1.1-1.4).	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities but failed to study two of the Parts (R1, 1.1-1.4).	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities but failed to study three of the Parts (R1, 1.1-1.4).	The Transmission Planner or Planning Coordinator failed to study the reliability impact of: interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of, generation, transmission, or electricity end-user Facilities.
R2	Long-term Planning	Medium	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, failed to coordinate and cooperate on

			with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).	with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).	with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).	studies with its Transmission Planner or Planning Coordinator.
R3	Long-term Planning	Medium	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.

R4	Long-term Planning	Medium	The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).	The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).	The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).	The Transmission Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities.
R5	Long-term Planning	Medium	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).	The applicable Generator Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities.

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Guidelines and Technical Basis

Entities should have documentation to support the technical rationale for determining whether an existing interconnection was “materially modified.” Recognizing that what constitutes a “material modification” will vary from entity to entity, the intent is for this determination to be based on engineering judgment.

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment (December 18, 2013-January 17, 2014).
2. SC authorized moving the SAR forward to standard development (March 31, 2014)
2.3.45-day Formal Comment Period with Parallel Initial Ballot (April 1-May 15, 2014)

Description of Current Draft

Anticipated Actions	Anticipated Date
45-day Formal Comment Period with Parallel Initial Ballot	April 2014
45-day Formal Comment Period with Parallel Additional Ballot	June 2014
Recirculation ballotFinal Ballot	July June 2014
BOT Aadoption	August 2014

Effective Dates

The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	January 13, 2006	Removed duplication of "Regional Reliability Organizations(s).	Errata
1	August 5, 2010	Modified to address Order No. 693 Directives contained in paragraph 693. Adopted by the NERC Board of Trustees.	Revised
1	February 7, 2013	R2 and associated elements approved by NERC Board of Trustees for retirement as part of the Paragraph 81 project (Project 2013-02) pending applicable regulatory approval.	
1	November 21, 2013	R2 and associated elements approved by FERC for retirement as part of the Paragraph 81 project (Project 2013-02)	
2		Revisions to implement the recommendations of the FAC Five-Year Review Team.	Revision under Project 2010-02

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

None.

When this standard has received ballot approval, the text boxes will be moved to the Application Guidelines Section of the Standard.

A. Introduction

1. **Title:** **Facility Interconnection Studies**

2. **Number:** FAC-002-2

3. **Purpose:** To study~~evaluate~~ the impact of interconnecting new or materially modified Facilities on the Bulk Electric System~~ by conducting and coordinating studies~~.

4. **Applicability:**

   4.1. Functional Entities:

   4.1.1 Planning Coordinator

   4.1.2 Transmission Planner

   ~~**4.1.2**~~**4.1.3** Transmission Owner

   ~~**4.1.3**~~**4.1.4** Distribution Provider

   ~~**4.1.4**~~**4.1.5** Generator Owner

   ~~**4.1.5**~~**4.1.6** Applicable Generator Owner

   4.1.6.1 Generator Owner with a~~n~~ fully executed Agreement to conduct a study ~~to~~ on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the ~~interconnected~~ Transmission system~~s~~.

   ~~**4.1.5.1**~~**4.1.7** Load-Serving Entity

   Rationale for Changes: "Interconnected Transmission systems" was changed to "Transmission system" in accordance with the change in the FAC-001-2 Applicability section.

5. ~~Load-Serving Entity~~ **Background:**

   ~~The objective of FAC-002 is to ensure that the entities involved in the integration of new or materially modified Facilities conduct and coordinate studies before any interconnection occurs so that the interconnection is determined to be technically feasible and reliable. This objective supports reliability principle 1, which states that "interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards."~~

B. Requirements and Measures

R1. Each Transmission Planner and each Planning Coordinator shall ~~conduct studies on~~study the reliability impact of: ~~integrating~~ (i) interconnecting new~~ or materially~~

~~modified~~ generation, transmission, or electricity end-user Facilities and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities. The following shall be studied~~. The studies shall include~~: *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

1.1. ~~Evaluation of t~~The reliability impact of the new interconnection, or materially modified existing interconnection, ~~Facilities~~ on affected system(s);

1.2. ~~Evaluation of c~~Adherence to~~ompliance~~ ~~with~~ applicable NERC Reliability Standards; regional and Transmission Owner planning criteria; and Facility interconnection requirements;

1.3. Steady-state, short-circuit, and dynamics studies, as necessary, to evaluate system performance under both normal and contingency conditions; and

1.4. ~~Documentation that the assessment included s~~Study assumptions, system performance, alternatives considered, and coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.

Rationale for Changes: To keep terminology consistent, the SDT changed "integrating" to "interconnecting." The SDT tightened the main requirement language by changing "conduct studies on" to "study" and removing the redundant "Evaluation of" and "Documentation that…" in the Parts. The SDT added "existing" to descriptions of material modification to draw a better distinction between new interconnections and materially modified existing interconnections.

Because "compliance" has a specific connotation in the NERC environment and, even when it comes to NERC Reliability Standards, the standard should not give the impression that the Transmission Planner or Planning Coordinator is responsible for the interconnecting entity's future compliance with NERC Standards. The SDT has changed "compliance" to "adherence" to retain the original intended meaning but reflect the fact that the entities cannot actually enforce future compliance with the Reliability Standards.

M1. Each Transmission Planner ~~and~~ or each Planning Coordinator shall have evidence (such as study reports, including documentation of reliability issues) that it met all requirements in Requirement R1.

R2. Each Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as

Rationale for Changes: To better connect with the reference to "material modifications" in R1, the SDT has added references to material modifications in R2, R3, and R4. It has also changed the references to subrequirements to "R1, Parts 1.1-1.4."

described in R1, Parts ~~R~~1.1-~~R~~1.4~~3~~. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M2. Each Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R2.

R3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to interconnect~~-~~ new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1, Parts ~~R~~1.1-~~R~~1.4~~3~~. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R3.

R4. Each Transmission Owner ~~and each applicable Generator Owner~~ shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested new or materially modified interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts ~~R~~1.1-~~R~~1.4~~3~~. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M4. Each Transmission Owner ~~and each applicable Generator Owner~~ shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R4.

R5. Each applicable Generator Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

Rationale for Changes: The requirements for both Transmission Owners and applicable Generator Owners remain exactly the same, but the addition of R5 makes clearer that applicable Generator Owners need not be concerned with addressing materially modified interconnections.

M5. Each applicable Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R5.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention

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

The Planning Coordinator, Transmission Planner, Transmission Owner, Distribution Provider, Generator Owner, applicable Generator Owner, and Load-Serving Entity shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The responsible entities shall retain documentation as evidence for three years.

If a responsible entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audit

Self-Certification

Spot Check

Compliance Investigation

Self-Reporting

Complaint

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Medium	The Transmission Planner or Planning Coordinator ~~conducted studies on~~ studied the reliability impact of: (i) ~~integrating~~ interconnecting new generation, transmission, or electricity end-user Facilities, ~~or~~ and (ii) materially ~~modified~~ modifying existing interconnections of generation, transmission, or electricity end-user Facilities, but failed to ~~include~~ study ~~in its studies~~ one of the P~~p~~arts (R1, ~~in R~~1.1-~~R~~1.4).	The Transmission Planner or Planning Coordinator ~~conducted studies on~~ studied the reliability impact of: (i) ~~integrating~~ interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) ~~or~~ materially ~~modified~~ modifying existing interconnections of generation, transmission, or electricity end-user Facilities but failed to ~~include~~ study ~~in its studies~~ two of the P~~p~~arts (R1, ~~in R~~1.1-~~R~~1.4).	The Transmission Planner or Planning Coordinator ~~conducted studies on~~ studied the reliability impact of: (i) ~~integrating~~ interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) ~~or~~ materially modifying existing interconnections of ~~modified~~ generation, transmission, or electricity end-user Facilities but failed to ~~include~~ study ~~in its studies~~ three of the P~~p~~arts (R1, ~~in R~~1.1-~~R~~1.4).	The Transmission Planner or Planning Coordinator failed to ~~conduct studies on~~study the reliability impact of: interconnecting ~~integrating~~ new generation, transmission, or electricity end-user Facilities, and (ii) ~~or~~ materially modifying existing interconnections of,~~modified~~ generation, transmission, or electricity end-user Facilities.
R2	Long-term Planning	Medium	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing

			interconnections of generation Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the Pparts (R1, in R1.1-R1.4).	interconnections of generation Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the Pparts (R1, in R1.1-R1.4).	interconnections of generation Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the Pparts in (R1, R1.1-R1.4).	interconnections of generation Facilities, failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.
R3	Long-term Planning	Medium	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.

			studies as described in one of the Pparts (R1, in R1.1-R1.4).	studies as described in two of the Pparts (R1, in R1.1-R1.4).	studies as described in three of the Pparts (R1, in R1.1-R1.4).	
R4	Long-term Planning	Medium	The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in one of the Pparts (R1, in R1.1-R1.4).	The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in two of the Pparts (R1, in R1.1-R1.4).	The Transmission Owner or applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in three of the Pparts (R1, in R1.1-R1.4).	The Transmission Owner or applicable Generator Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities.
R5	Long-term Planning	Medium	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as	The applicable Generator Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities.

			described in one of the Parts (R1, 1.1-1.4).	described in two of the Parts (R1, 1.1-1.4).	described in three of the Parts (R1, 1.1-1.4).	

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Guidelines and Technical Basis

Entities should have documentation to support the technical rationale for determining whether an existing ~~Facility~~ interconnection was "materially modified." Recognizing that what constitutes a "material modification" will vary from entity to entity, the intent is for this determination to be based on engineering judgment.

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. SAR posted for comment (~~Dates of posting~~December 18, 2013-January 17, 2014).
2. SC authorized moving the SAR forward to standard development (~~SC meeting date when authorized).~~March 31, 2014)
3. 45-day Formal Comment Period with Parallel Initial Ballot (April 1-May 15, 2014)

Description of Current Draft

~~(Describe the type of action associated with this posting such as 30-day informal comment period, 30-day formal comment period, 45-day formal comment period with parallel initial ballot, 30-day formal comment period with parallel successive ballot, recirculation ballot)~~

Anticipated Actions	Anticipated Date
~~30-day Formal Comment Period~~	
45-day Formal Comment Period with Parallel Initial Ballot	April 2014
~~30-day Formal Comment Period with Parallel Successive Ballot~~Final Ballot	June 2014
~~Recirculation ballot~~	
BOT ~~adoption~~Adoption	August 2014

Effective Dates

The first day of the first calendar quarter ~~six months~~that is one year after the date that this standard is approved by an applicable ~~regulatory approval;~~governmental authority or as otherwise provided for in ~~those jurisdictions~~a jurisdiction where ~~no regulatory~~ approval by an applicable governmental authority is required~~,~~ for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter ~~six months~~that is one year after the date this standard is adopted by the NERC Board of ~~Trustees' adoption.~~ Trustees or as otherwise provided for in that jurisdiction.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	January 13, 2006	Removed duplication of "Regional Reliability Organizations(s).	Errata
1	August 5, 2010	Modified to address Order No. 693 Directives contained in paragraph 693. Adopted by the NERC Board of Trustees.	Revised
1	February 7, 2013	R2 and associated elements approved by NERC Board of Trustees for retirement as part of the Paragraph 81 project (Project 2013-02) pending applicable regulatory approval.	
1	November 21, 2013	R2 and associated elements approved by FERC for retirement as part of the Paragraph 81 project (Project 2013-02)	
2		Revisions to implement the recommendations of the FAC Five-Year Review Team.	Revision under Project 2010-02

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

~~**Term:** definition~~None.

When this standard has received ballot approval, the text boxes will be moved to the Application Guidelines Section of the Standard.

A. Introduction

~~1. Title: Coordination of Plans for New Generation, Transmission, and End-User Facilities~~

1. Title: Facility Interconnection Studies

2. **Number:** FAC-002-~~1~~2

~~3. Purpose: To avoid adverse impacts on reliability, Generator Owners and Transmission Owners and electricity end-users must meet facility connection and performance requirements.~~

3. **Purpose:** To study the impact of interconnecting new or materially modified Facilities on the Bulk Electric System.

4. **Applicability:**

4.1. **Functional Entities:**

4.1.1 Planning Coordinator

~~4.1.1~~4.1.2 ~~Generator Owner~~

~~4.1.2~~4.1.3 Transmission Planner

~~4.1.3~~4.1.4 Transmission Owner

~~4.1.4~~4.1.5 Distribution Provider

~~4.1.5~~4.1.6 Generator Owner

4.1.7 Applicable Generator Owner

4.1.7.1 Generator Owner with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.

~~4.1.6~~4.1.8 Load-Serving Entity

~~4.1.7~~4.1.9 ~~Transmission Planner~~

~~4.1.8 Planning Authority~~

5. **Background:**

~~Text~~

B. Requirements and Measures

R1. ~~The Generator Owner,~~Each Transmission ~~Owner, Distribution Provider,~~Planner and ~~Load-Serving Entity seeking to integrate~~each Planning Coordinator shall study the reliability impact of: (i) interconnecting new generation ~~facilities~~, transmission

~~facilities, and~~ , or electricity end-user ~~facilities shall each coordinate and cooperate on its assessments with its Transmission Planner and Planning Authority. The assessment~~Facilities and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities. The following shall ~~include~~be studied: *[Violation Risk Factor~~:]~~: Medium]* *[Time Horizon: Long-term Planning]*

1.1. ~~Evaluation of the~~The reliability impact of the new ~~facilities and their connections~~interconnection, or materially modified existing interconnection, on ~~the interconnected transmission systems.~~affected system(s);

1.2. ~~Ensurance of compliance with~~ Adherence to applicable NERC Reliability Standards ~~and applicable Regional, subregional, Power Pool, and individual system~~; regional and Transmission Owner planning criteria; and ~~facility connection~~Facility interconnection requirements~~.~~;

~~**1.3.** Evidence that the parties involved in the assessment have coordinated and cooperated on the assessment of the reliability impacts of new facilities on the interconnected transmission systems. While these studies may be performed independently, the results shall be jointly evaluated and coordinated by the entities involved.~~

~~**1.4.**~~**1.3.** ~~Evidence that the assessment included steady~~Steady-state, short-circuit, and dynamics studies, as necessary, to evaluate system performance under both normal and contingency conditions ~~in accordance with Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0.~~; and

~~**1.5.**~~**1.4.** ~~Documentation that the assessment included study~~Study assumptions, system performance, alternatives considered, and ~~jointly~~ coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved. ~~The Planning Authority,~~

M1. Each Transmission Planner~~, Generator Owner, Transmission Owner, Load-Serving Entity, and Distribution Provider's~~ or each Planning Coordinator shall have evidence (such as study reports, including documentation of ~~its assessment of the~~ reliability ~~impacts of new facilities shall address~~issues) that it met all ~~items in Reliability Standard FAC-002-0~~ requirements in Requirement R1.

~~**R2.** The Planning Authority, Transmission Planner, Generator Owner, Transmission Owner, Load-Serving Entity, and Distribution Provider shall each retain its documentation (of its evaluation of the reliability impact of the new facilities and their connections on the interconnected transmission systems) for three years and shall provide the documentation to the Regional Reliability Organization(s) and NERC on request (within 30 calendar days). (Retirement approved by FERC effective January 21, 2014.) *[Violation Risk Factor:] [Time Horizon:]*~~

~~**M2.** The Planning Authority, Transmission Planner, Generator Owner, Transmission Owner, Load-Serving Entity, and Distribution Provider shall each have evidence of its assessment of the reliability impacts of new facilities and their connections on the~~

~~interconnected transmission systems is retained and provided to other entities in accordance with Reliability Standard FAC-002-0_R2. (Retirement approved by FERC effective January 21, 2014.)~~

R2. Each Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M2. Each Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R2.

R3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R3.

R4. Each Transmission Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested new or materially modified interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M4. Each Transmission Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R4.

R5. Each applicable Generator Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts 1.1-1.4. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

M5. Each applicable Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R5.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, "Compliance Enforcement Authority" (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention

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

The ~~Reliability~~Planning Coordinator~~ and~~, Transmission ~~Operator~~Planner, Transmission Owner, Distribution Provider, Generator Owner, applicable Generator Owner, and Load-Serving Entity shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

The responsible entities shall retain documentation as evidence for three years.

If a responsible entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.

The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audit

Self-Certification

Spot Check

Compliance Investigation

Self-Reporting

Complaint

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Long-term Planning	Medium	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities, but failed to study one of the Parts (R1, 1.1-1.4).	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities but failed to study two of the Parts (R1, 1.1-1.4).	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities but failed to study three of the Parts (R1, 1.1-1.4).	The Transmission Planner or Planning Coordinator failed to study the reliability impact of: interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of, generation, transmission, or electricity end-user Facilities.
~~R1~~R2	Long-term Planning	Medium	~~The Responsible Entity failed to include in their assessment one of the subrequirements.~~The Generator Owner seeking to interconnect new generation Facilities, or to materially	~~The Responsible Entity failed to include in their assessment two of the subrequirements~~The Generator Owner seeking to interconnect new generation Facilities, or to materially	~~The Responsible Entity failed to include in their assessment three of the subrequirements.~~The Generator Owner seeking to interconnect new generation Facilities,	~~The Responsible Entity failed to include in their assessment four or more of the subrequirements.~~The Generator Owner seeking to interconnect new generation Facilities,

			modify existing interconnections of generation Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).	modify existing interconnections of generation Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).	or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).	or to materially modify existing interconnections of generation Facilities, failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.
R1.1			Not Applicable.	Not Applicable.	Not Applicable.	The responsible entity's assessment did not include the evaluation.
R1.2R3	Long-term Planning	Medium	Not Applicable.The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user	Not Applicable.The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user	Not Applicable.The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user	The responsible entity's assessment did not include the ensurance of compliance.The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify

			Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).	Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).	Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).	existing interconnections of transmission Facilities or electricity end-user Facilities, failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.
~~R1.3~~			~~Not Applicable.~~	~~Not Applicable.~~	~~Not Applicable.~~	~~The responsible entity's assessment did not include the evidence of coordination.~~
~~R1.4~~R4	Long-term Planning	Medium	~~Not Applicable.~~The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).	~~Not Applicable.~~The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).	~~Not Applicable.~~The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).	~~The responsible entity's assessment did not include the evidence of the studies.~~The Transmission Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities.

R1.5			Not Applicable.	Not Applicable.	Not Applicable.	The responsible entity's assessment did not include the documentation.
R2R5	Long-term Planning	Medium	The responsible entity provided the documentation more than 30 calendar days, but not more than 45 calendar days, after a request.The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).	The responsible entity provided the documentation more than 45 calendar days, but not more than 60 calendar days, after a request.The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).	The responsible entity provided the documentation more than 60 calendar days, but not more than 120 calendar days, after a request.The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).	The responsible entity provided the documentation more than 120 calendar days after a request or was unable to provide the documentation.The applicable Generator Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities.

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Guidelines and Technical Basis

~~**Requirement R1:**~~

~~**Requirement R2:**~~

~~**Requirement R3:**~~Entities should have documentation to support the technical rationale for determining whether an existing interconnection was “materially modified.” Recognizing that what constitutes a “material modification” will vary from entity to entity, the intent is for this determination to be based on engineering judgment.

Implementation Plan

Project 2010-02 – Connecting New Facilities to the Grid

Requested Approvals

- FAC-001-2 – Facility Interconnection Requirements
- FAC-002-2 – Facility Interconnection Studies

Requested Retirements

- FAC-001-1 – Facility Connection Requirements
- FAC-002-1 – Coordination of Plans for New Generation, Transmission, and End-User Facilities

Prerequisite Approvals

There are no other standards that must receive approval prior to the approval of these standards.

Revisions to Defined Terms in the NERC Glossary

There are no revisions to defined terms associated with these standards.

Background

Project 2010-02 Connecting New Facilities to the Grid is implementing the recommendations that the FAC Five-Year Review Team made with respect to FAC-001 and FAC-002. The changes are largely focused on adding clarity, removing redundancy, retiring requirements with no impact on the reliable operation of the Bulk Electric System, and bringing compliance elements in accordance with NERC guidelines.

The changes should not require significant change in practice for entities, but acknowledging that some entities have lengthy approval processes for (inter)connection handbook or procedure revisions, one year was deemed reasonable for all applicable entities to implement the standards, including revisions to internal documents or procedures.

Applicable Entities

- Planning Coordinator (FAC-002-2)
- Transmission Planner (FAC-002-2)
- Transmission Owner (FAC-001-2 and FAC-002-2)
- Distribution Provider (FAC-002-2)
- Generator Owner (FAC-002-2)
- Applicable Generator Owner: Generator Owner with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems. (FAC-001-2 and FAC-002-2)
- Load-Serving Entity

Effective Date

Both FAC-001-2 and FAC-002-2 shall become effective as follows:

The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

Retirements

FAC-001-1 and FAC-002-1 shall be retired at midnight of the day immediately prior to the effective date of FAC-001-2 and FAC-002-2 in the particular jurisdiction in which the new standard is becoming effective.

Implementation Plan

Project 2010-02 – Connecting New Facilities to the Grid

Requested Approvals

- FAC-001-2 – Facility Interconnection Requirements
- FAC-002-2 – Facility Interconnection Studies

Requested Retirements

- FAC-001-1 – Facility Connection Requirements
- FAC-002-1 – Coordination of Plans for New Generation, Transmission, and End-User Facilities

Prerequisite Approvals

There are no other standards that must receive approval prior to the approval of these standards.

Revisions to Defined Terms in the NERC Glossary

There are no revisions to defined terms associated with these standards.

Background

Project 2010-02 Connecting New Facilities to the Grid is implementing the recommendations that the FAC Five-Year Review Team made with respect to FAC-001 and FAC-002. The changes are largely focused on adding clarity, removing redundancy, retiring requirements with no impact on the reliable operation of the Bulk Electric System, and bringing compliance elements in accordance with NERC guidelines.

The changes should not require significant change in practice for entities, but acknowledging that some entities have lengthy approval processes for (inter)connection handbook or procedure revisions, one year was deemed reasonable for all applicable entities to implement the standards, including revisions to internal documents or procedures.

Applicable Entities

- Planning Coordinator (FAC-002-2)
- Transmission Planner (FAC-002-2)
- Transmission Owner (FAC-001-2 and FAC-002-2)
- Distribution Provider (FAC-002-2)
- Generator Owner (FAC-002-2)
- Applicable Generator Owner: Generator Owner with a~~n~~ fully executed Agreement to conduct a study ~~to~~ on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems. (FAC-001-2 and FAC-002-2)
- Load-Serving Entity

Effective Date

Both FAC-001-2 and FAC-002-2 shall become effective as follows:

The first day of the first calendar quarter that is one year after the date that this standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is one year after the date this standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

Retirements

FAC-001-1 and FAC-002-1 shall be retired at midnight of the day immediately prior to the effective date of FAC-001-2 and FAC-002-2 in the particular jurisdiction in which the new standard is becoming effective.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Authorization Request Form

When completed, please email this form to:
sarcomm@nerc.com

NERC welcomes suggestions to improve the reliability of the Bulk-Power System through improved Reliability Standards. Please use this form to submit your request to propose a new or a revision to a NERC's Reliability Standard.

Request to propose a new or a revision to a Reliability Standard			
Title of Proposed Reliability Standard:	FAC-001-2 – Facility Interconnection Requirements and FAC-002-2 – Facility Interconnection Studies		
Date Finalized:	March 31, 2014		
SAR Requester Information			
Name:	The FAC Five-Year Review Team (Roster)		
Organization:	N/A		
Telephone:	N/A	E-mail:	N/A
SAR Type (Check as many as applicable)			
☐ New Reliability Standard ☒ Revision to existing Reliability Standards		☐ Withdrawal of existing Reliability Standard ☐ Urgent Action	

SAR Information
Industry Need (What is the industry problem this request is trying to solve?):
The Standards Committee assigned six subject matter experts to review the FAC family of Reliability Standards as part of NERC's obligation to conduct periodic reviews of its Reliability Standards. The Five-Year Review Team determined that FAC-001-1 and FAC-002-1 remain necessary for reliability to ensure that entities establish Facility connection requirements and then conduct assessments using those requirements before integrating new Facilities. Both Reliability Standards, however, require revision to refocus industry effort on those tasks that have a true impact on reliability.

SAR Information
Purpose or Goal (How does this request propose to address the problem described above?):
This SAR proposes revising FAC-001-1 and FAC-002-1 in line with the recommendations of the FAC Five-Year Review Team to add clarity, remove redundancy, retire requirements with no impact on the reliable operation of the Bulk Electric System (based on application of the Paragraph 81 criteria), and bring compliance elements in accordance with NERC guidelines.
Identify the Objectives of the proposed Reliability Standard's requirements (What specific reliability deliverables are required to achieve the goal?):
The objective of FAC-001-1 is to ensure that Transmission Owners and Generator Owners establish Facility requirements so that Facilities seeking interconnection will have the information necessary for considering and pursuing that interconnection. This objective supports reliability principle 3, which states that "information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably." The objective of FAC-002-1 is to ensure that the entities involved in the integration of new Facilities conduct assessments – using the connection requirements established in FAC-001-1 – before any interconnection occurs so that the interconnection is determined to be technically feasible and reliable. This objective supports reliability principle 1, which states that "interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards."
Brief Description (Provide a paragraph that describes the scope of this Reliability Standard action.)
FAC-001-1 should be revised to retire a requirement (R4) that is redundant with obligations already captured in the Rules of Procedure, to remove subparts of a requirement (R3) that are too prescriptive for inclusion in a Reliability Standard, and to remove parts of the requirement (R1) that are redundant or have no impact on reliability. The VRFs should also be modified for conformance with NERC's VRF guidelines. FAC-002-1 should be revised to make clear the responsibilities of the various entities to whom the Reliability Standard is applicable. R1 should also be revised to retire parts of the requirement that are redundant or have no impact on reliability.

SAR Information
It may be determined, during the execution of this project, that FAC-001-1 and FAC-002-1 should be combined into one Reliability Standard.
Detailed Description (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR. Also provide a justification for the development or revision of the Reliability Standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the Reliability Standard action.)
Per the *FAC Five-Year Review Team Recommendation to Revise FAC-001-1*, the drafting team should consider: • Revising the title and purpose of the Reliability Standard to reflect the language in the requirements. • Retiring the following reference in R1: "…compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements" because it is redundant with FAC-002-1, R1.2 and built into the ERO framework established in Order 672. • Retiring all of the subparts in R3, except for R3.1.1 and R3.1.2, and moving them to a guidance document. • Modifying R3 to ensure that the impact on third parties is appropriately addressed. • Retiring R4. • Modifying the VRFs for conformance with NERC's VRF guidelines. • Adding Time Horizons to each requirement. Per the *FAC Five-Year Review Team Recommendation to Revise FAC-002-1*, the drafting team should consider: • Revising the title and purpose of the Reliability Standard to reflect the language in the requirements. • Changing "Planning Authority" in the applicability section to "Planning Coordinator" to reflect the Functional Model, as well as the recently revised TPL-001-4. • Splitting R1 into three requirements to add clarity and better distinguish the actions required of the applicable entities. One requirement should describe the Transmission Planner and Planning Coordinators' responsibility for conducting assessments. A second requirement should describe

SAR Information
the Generator Owners' responsibility for coordinating and cooperating with the Transmission Planner and Planning Coordinator as those assessments are conducted. A third requirement should describe the Transmission Owners', Distribution Providers', and Load-Serving Entities' responsibility for coordinating and cooperating with the Transmission Planner and Planning Coordinator as those assessments are conducted. • Revising the subparts of R1 to remove elements that are more appropriate for Measures. • Modifying R1.1 to ensure that the impact on third parties is appropriately addressed. • Modifying R1.4 to update the reference to the TPL Reliability Standards to reflect the changes in proposed TPL-001-4. • Adding Time Horizons to each requirement.

Reliability Functions	
The Reliability Standards will Apply to the Following Functions (Check each one that applies.)	
☐ Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
☐ Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
☐ Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
☒ Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
☐ Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator area.
☒ Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.

Reliability Functions		
☐	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☒	Transmission Owner	Owns and maintains transmission facilities.
☐	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☒	Distribution Provider	Delivers electrical energy to the End-use customer.
☒	Generator Owner	Owns and maintains generation facilities.
☐	Generator Operator	Operates generation unit(s) to provide real and reactive power.
☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☐	Market Operator	Interface point for reliability functions with commercial functions.
☒	Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

Reliability and Market Interface Principles	
Applicable Reliability Principles (Check all that apply).	
☒	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards.
☐	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
☐	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
☐	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.

Reliability and Market Interface Principles	
☐	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☐	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
☐	8. Bulk power systems shall be protected from malicious physical or cyber attacks.

Does the proposed Reliability Standard comply with all of the following Market Interface Principles?	Enter (yes/no)
1. A Reliability Standard shall not give any market participant an unfair competitive advantage.	Yes
2. A Reliability Standard shall neither mandate nor prohibit any specific market structure.	Yes
3. A Reliability Standard shall not preclude market solutions to achieving compliance with that Reliability Standard.	Yes
4. A Reliability Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with Reliability Standards.	Yes

Related Reliability Standards	
Reliability Standard No.	Explanation
TPL Family	FAC-002-1, R1.4 references TPL-001-0, TPL-002-0, and TPL-003-0. R1.4 requires that assessments include: "Evidence that the assessment included steady-state, short-circuit, and dynamics studies as necessary to evaluate system performance under both normal and contingency conditions in accordance with Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0." These Reliability Standards have been revised and combined in TPL-001-4, which will become enforceable on January 1, 2015. The drafting team should ensure that this reference is updated to either refer to TPL-001-4 or TPL Reliability Standards more generically.

Related SARs – N/A	
SAR ID	Explanation

Regional Variances – N/A	
Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
RFC	
SERC	
SPP	
WECC	

Consideration of Issues and Directives

Project 2010-02 – Connecting New Facilities to the Grid

Project 2010-02 – Connecting New Facilities to the Grid is implementing the recommendations that the FAC Five-Year Review Team (FYRT) made with respect to FAC-001-1 and FAC-002-1. The Standard Drafting Team (SDT) has proposed changes to add clarity, remove redundancy, retire requirements with no impact on the reliable operation of the Bulk Electric System, and bring compliance elements in accordance with NERC guidelines. Along with considering stakeholder comments as it proposed changes (see the Consideration of Comments form), the SDT considered Order No. 693 directives related to FAC-002-0, the recommendations of the Independent Experts Review Project, Phase 1 Paragraph 81 suggestions, and the recommendations of the Integration of Variable Generation Task Force

FERC Directives

There are two outstanding directives from FERC Order No. 693[1] that apply to FAC-002-0. The first directs NERC to consider incorporating a reference to TPL-004-0 in FAC-002-0.[2] The SDT considered this suggestion and has found that this directive is outdated. FERC has approved TPL-001-4 and it will become enforceable on January 1, 2015. Further, the SDT has deleted any reference to the TPL Reliability Standards because the reference is redundant with the FAC-002-2, R1, Part 1.2 requirement to study adherence with all NERC Reliability Standards. To continue including a separate reference to the TPL Reliability Standards is redundant and could lead to multiple violations for the same action.

The second outstanding directive related to FAC-002-0 asked NERC to consider the comments of various entities asking for clarification of R1.[3] For ease of review, the Project 2010-02 SDT has summarized the comments of the various entities below, along with its response to those comments.

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[1] FERC Order No. 693, which approved 83 Reliability Standards as mandatory and effective, is available here: http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/ORDER%20693.pdf.
[2] Order No. 693 at P 692 ("With respect to FirstEnergy's suggestion to also include a reference to Reliability Standard TPL-004-0, we direct the ERO to consider it through the Reliability Standards development process.").
[3] Order No. 693 at P 687.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
All of the above commenters request clarification of Requirement R1 in the Reliability Standard that states that various functional entities "shall each coordinate and cooperate on its assessments with its transmission planner and planning authority." The Commission believes that all entities listed in the Applicability section have a stake in the performance of the system and should have the opportunity to provide input in the assessment under R1. The Commission believes that commenters have raised valid concerns that, if addressed, would make the Reliability Standard better. The wording would allow a number of organizational approaches to achieving the goal of performing an analysis. The Commission does not intend to limit which organizational approach is used by the entities, only to assure that a single competent and collaborative analysis is performed. Therefore, the Commission directs the ERO to address these concerns in the Reliability Standards development process.	FERC Order No. 693 at P 687	The SDT has addressed the concerns through the standard development process and responses are included below.
APPA requested that the Reliability Standard be clarified to state that the required assessment must be performed only by the Transmission Planner and the Planning Authority. Related, TAPS expressed concern that Load-Serving Entities are not equipped to perform assessments. California Cogeneration expressed a similar	FERC Order No. 693 at P 683 and 685	The SDT is addressing these concerns by separating R1 into five requirements that better clarify the responsibilities of all entities involved. The new R1 focuses exclusively on the Transmission Planner and Planning Coordinator's responsibility for conducting studies, and the new R2, R3, R4, and R5 separate out the requirement for Generator Owners, Transmission

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
concern about Generator Owners' ability to perform an assessment.		Owners, Distribution Providers, Load-Serving Entities, and applicable Generator Owners to simply coordinate and cooperate on those studies.
Xcel requested that the Commission clarify that only one required assessment needs to be done when new facilities are added, and that all the listed entities should participate in that single assessment.	FERC Order No. 693 at P 683	The SDT agrees that it is possible that only one set of studies may be necessary, and in that case all entities could simply participate and sign on to the same set of studies, but in other cases, multiple sets of studies might be conducted and later coordinated.
FirstEnergy requested that NERC clarify what is considered a new facility and asks if, for example, up-rates should be included as new facilities.	FERC Order No. 693 at P 684	The SDT believes the determination of whether an up-rate needs to be assessed the same way as a new Facility is up to the entity that is conducting the study, and that such decisions will vary by region. It has added language to the Guidelines and Technical Basis section of the standard clarifying that entities should have documentation to support the technical rationale for determining whether an existing interconnection was "materially modified."
Six Cities requested that this Reliability Standard clarify that all applicable entities must make available data necessary for all other responsible entities to perform the required assessment.	FERC Order No. 693 at P 685	The SDT believes that the requirement to coordinate and cooperate requires the sharing of all data necessary for conducting a study. The SDT has modified the language of the proposed R2-R4 to add detail ("including but not limited to the provision of data") to clarify.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
Six Cities also suggested that the transmission operator be added as an entity to which this Reliability Standard is applicable, at least from the perspective that it make necessary data available to all other entities responsible for assessment.	FERC Order No. 693 at P 685	The SDT believes that data from the Transmission Owner would account for the necessary data from the transmission side. It would be the responsibility of the Transmission Planner or Planning Coordinator to include any relevant operations data.
FirstEnergy stated that both MISO and PJM already have Large Generator Interconnection Procedures (LGIP) in place that provide a formal process that meets the requirements listed under R1, and asks that the Commission state that complying with the interconnection agreement and/or OATT satisfies this requirement.	FERC Order No. 693 at P 686	The SDT points out that regardless of what is covered in a tariff, requirements for interconnecting new Facilities still need to be addressed in NERC's Reliability Standards. The requirement for Open Access Transmission Tariffs varies from region to region. FERC handles market-related documents like tariffs differently from reliability-related documents like standards, and reliability standards should not rely upon market-related documents to address reliability issues.

Independent Expert Review Project Recommendations

In the Final Report[4] and Requirements Scoring Spreadsheet[5], the Standards Independent Experts Review Project (IERP) continued to support the reliability need for both FAC-001 and FAC-002. The SDT implemented the majority of the IERP's recommendations, but is proposing some changes that are different from the IERP recommendations in some cases where industry expertise and consensus suggested a different solution.

[4] The Standards Independent Experts Review Project – Final Report is available here: http://www.nerc.com/pa/Stand/Standards%20Development%20Plan%20Library/Standards_Independent_Experts_Review_Project_Report.pdf.

[5] The Standards Independent Experts Review Project – Requirements Scoring Spreadsheet is available here: http://www.nerc.com/pa/Stand/Standards%20Development%20Plan%20Library/Standards_IERP_Requirements_Spreadsheet_August_29_2013.xls.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
FAC-001-1, R1: Word published is not clear	IERP	The SDT has changed requirement to "publish" be changed to "make available upon request."
FAC-001-1, R1 and R2: Team had long discussion on the fact that FAC-001 requires the TO to publish the Facility connection requirements, but it does not put a requirement on anyone wanting to interconnect to meet the requirements in the Facility connection requirements. NERC should work with industry to see if an enforcement on entities wanting to interconnect should be added to the NERC standards.	IERP	The SDT does not believe such a change is necessary. FAC-002-1, R1 Part 1.2 requires that studies of the impact of interconnecting new Facilities or materially modifying existing interconnections include consideration of adherence with NERC Reliability Standards; applicable regional and Transmission Owner planning criteria; and *Facility interconnection requirements.*
FAC-001-1, R3: R3: Streamline the items in 3.1 by removing- 3.1.1, 3.1.2, 3.1.3, 3.1.9, 3.1.11, 3.1.13, 3.1.15, 3.1.16	IERP	The SDT believes that all Parts except R3, Part 3.1.1 and R3, Part 3.1.2 are too prescriptive to include in a standard and has recommended retaining the Parts but moving them to a Guidelines and Technical Basis section.
FAC-001-1, R4: Administrative; should be deleted	IERP	The SDT agrees and has proposed deleting the original R4.
FAC-002-1, R1: Merge 1.1 and 1.4; retire 1.2, 1.3 and 1.5. The new 1.1 and 1.4 should say 'the assessment shall address requirements as identified in the FCR and the performance requirements as identified in the TPL stds."interconnection agreement and/or OATT satisfies this requirement.	IERP	Though the SDT does not agree with the specific recommendations of the IERP, the team agrees that there is room for improvement in the Parts of R1. The SDT has proposed modifications to the original R1, Parts 1.1-R1.5 for consistency and added clarity. The SDT recommends the original R1, Part 1.3 be deleted and R1, Part 1.5 modified to focus less on documentation and more on the content of the assessment.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
		The SDT has also removed the reference to TPL standards because it was redundant with the reference to all NERC Reliability Standards in R1, Part 1.2.
FAC-002-1, R1: "…applicable Regional requirements" language is not clear	IERP	The SDT believes that the list of standards and criteria that studies must consider catalogs some of the elements that must be considered in studies of a new interconnection. Some regions have specific requirements that may inform Facility interconnection requirements, and those should be considered.
FAC-001-1 and FAC-002-1: The IERP suggested a new construct be adopted by the ERO for NERC Reliability Standards. Under this construct, FAC-001 and FAC-002 would be combined with TPL-001, MOD-010, MOD-012, MOD-025, MOD-026, and MOD-027 to "Assess Transmission Future Needs and Develop Transmission Expansion Plans - Not Operational Planning." Has the Five Year Review Team considered this construct?	IERP	While the SDT supports this general direction, transition to this new framework is premature and would need to be carefully coordinated across a variety of projects.

Paragraph 81 Phase 1 Recommendations

During Phase 1 of the Paragraph 81 (P81) process, stakeholder were asked to make suggestions about future candidates for P81 retirement. Below, the standard drafting team (SDT) addresses the stakeholder suggestions from P81 Phase 1 that related to FAC-001 and FAC-002. Note that duplicate suggestions have been consolidated.

Project 2010-02 – Connecting New Facilities to the Grid		
Issue or Directive	**Source**	**Consideration of Issue or Directive**
FAC-001-0, R1 and R2: Retire R1 and R2; they relate to documentation	P81	While the SDT agrees that many documentation requirements are not related to reliability, the team believes that FAC-001 is about more than documentation; it requires the *establishment* of Facility interconnection requirements. The development and documentation of these Facility interconnection requirements facilitates the studies that take place in FAC-002. Although Facility interconnection requirements for public utilities are typically covered in Open Access Transmission Tariffs (OATTs) under Sections 205 and 206 of the Federal Power Act, this leaves out electric utilities such as municipalities, cooperatives, and federal entities (e.g., the Bonneville Power Administration and the Tennessee Valley Authority), which are addressed under Section 215 of the Federal Power Act. OATTs also would not apply to non-jurisdictional entities that fall in NERC's footprint (e.g., Canadian entities). Ultimately, the SDT agreed that Facility interconnection requirements are necessary for reliability and should continue to be explicitly addressed in NERC standards.
FAC-002-1, R1: R1 assigns responsibility to the wrong functional entity	P81	The SDT believes this concern is addressed by separating R1 into five requirements that better clarify the responsibilities of all entities involved.

Integration of Variable Generation Task Force Recommendations

The Integration of Variable Generation Task Force (IVGTF), a task force under the Planning Committee, was asked to make recommendations for how NERC interconnection procedures and standards should be enhanced to address voltage and frequency ride-through, reactive and real power control, and frequency/inertial response criteria in light of the evolving range of technical characteristics and physical capabilities of variable generation equipment. The *2012 Special Assessment: Interconnection Requirements for Variable Generation*[6] includes several recommendations related to FAC-001.

The recommendations suggested adding additional detail to FAC-001, largely to account for the integration of variable generation, and they are generally inconsistent with the less-prescriptive direction of the SDT. Facility interconnection requirements are inherently inconsistent, and the proposed FAC-001-2 acknowledges that, while offering guidance (in the Guidelines and Technical Basis section) on the elements that should be considered for inclusion in Facility interconnection requirements. A Facility interconnection requirement standard cannot be too prescriptive about what must be included in a requirement because each Facility is different, and each Facility is subject to different regional and Transmission Owner Planning criteria. The SDT did accept the IVGTF's suggestion to add "including specifications for minimum static and dynamic reactive power requirements" to better describe the Reactive Power requirements in the "Voltage, Reactive Power, and power factor control bullet."

[6] The *2012 Special Assessment: Interconnection Requirements for Variable Generation* is available here: http://www.nerc.com/files/2012_IVGTF_Task_1-3.pdf.

Project 2010-02 – Connecting New Facilities to the Grid

Mapping Document

Proposed New Standards

- FAC-001-2 – Facility Interconnection Requirements
- FAC-002-2 – Facility Interconnection Studies

Proposed Retirements

- FAC-001-1 – Facility Connection Requirements
- FAC-002-1 – Coordination of Plans for New Generation, Transmission, and End-User Facilities

Background

Project 2010-02 Connecting New Facilities to the Grid is implementing the recommendations that the FAC Five-Year Review Team made with respect to FAC-001 and FAC-002. The changes are largely focused on adding clarity, removing redundancy, retiring requirements with no impact on the reliable operation of the Bulk Electric System, and bringing compliance elements in accordance with NERC guidelines.

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
R1. The Transmission Owner shall document, maintain, and publish Facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements. The Transmission	FAC-001-2, R1	R1 was revised in under FAC-001-2 to remove elements that are redundant with FAC-002 and clarify the actions required.

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
Owner's Facility connection requirements shall address connection requirements for: **R1.1.** Generation Facilities, **R1.2.** Transmission Facilities, and **R1.3.** End-user Facilities		
R2. Each applicable Generator Owner shall, within 45 days of having an executed Agreement to evaluate the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems (under FAC-002-1), document and publish its Facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements.	FAC-001-2, R2	R2 was revised in under FAC-001-2 to remove elements that are redundant with FAC-002 and clarify the actions required.
R3. Each Transmission Owner and each applicable Generator Owner (in accordance with Requirement R2) shall address the following items in its Facility connection requirements: **R3.1.** Provide a written summary of its plans to achieve the required system performance as	R3 was separated into two requirements, R3 (for Transmission Owners) and R4 (for Generator	The SDT wants to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as Parts of R3 and R4 was deemed too prescriptive, as frequently some items in the list will not apply to all applicable entities – and some applicable

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
described in Requirements R1 or R2 throughout the planning horizon: **R3.1.1.** Procedures for coordinated joint studies of new Facilities and their impacts on the interconnected Transmission systems. **R3.1.2.** Procedures for notification of new or modified Facilities to others (those responsible for the reliability of the interconnected Transmission systems) as soon as feasible. **R3.1.3.** Voltage level and MW and MVAR capacity or demand at point of connection. **R3.1.4.** Breaker duty and surge protection. **R3.1.5.** System protection and coordination. **R3.1.6.** Metering and telecommunications. **R3.1.7.** Grounding and safety issues. **R3.1.8.** Insulation and insulation	Owners). R3, 3.1.1, and 3.1.2 have been retained in R3 and R4 of FAC-001-2. The remaining Parts have been transferred to the Guidelines and Technical Basis section of FAC-001-2.	entities will have requirements that are not included in the list. The Guidelines should be used as a starting point for each Transmission Owner and applicable Generator Owner to consider in the development of Facility interconnection requirements. Applicable Generator Owners were previously included in R3, but have been separated into a different requirement to make clearer that applicable Generator Owners need not be concerned with addressing materially modified existing interconnections. Otherwise, the requirements for both Transmission Owners and applicable Generator Owners remain exactly the same.

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
coordination. **R3.1.9.** Voltage, Reactive Power, and power factor control. **R3.1.10.** Power quality impacts. **R3.1.11.** Equipment Ratings. **R3.1.12.** Synchronizing of Facilities. **R3.1.13.** Maintenance coordination. **R3.1.14.** Operational issues (abnormal frequency and voltages). **R3.1.15.** Inspection requirements for existing or new Facilities. **R3.1.16.** Communications and procedures during normal and emergency operating conditions.		
R4. The Transmission Owner shall maintain and update its Facility connection requirements as required. The Transmission Owner shall make documentation of these requirements available to the users of the transmission system, the Regional Entity, and ERO on request (five business days).	Retired	The requirement to maintain and update Facility connection requirements in Requirement R4 is contained in Requirement R1's proposed new language to "document, update as needed, and make available upon request." The second sentence of the current Requirement R4, which requires Transmission Owners to make documentation available, is redundant with the recommended changes to R1 and R2 under FAC-001-2.

Standard: FAC-001		
Requirement in Approved Standard (FAC-001-1)	**Translation to New Standard or Other Action**	**Comments**
		Further, requests to share data or information to Regional Entities and the ERO upon request are already addressed in Section 1600 of NERC's Rules of Procedure.

Standard: FAC-002		
Requirement in Approved Standard (FAC-002-1)	**Translation to New Standard or Other Action**	**Comments**
R1. The Generator Owner, Transmission Owner, Distribution Provider, and Load-Serving Entity seeking to integrate generation facilities, transmission facilities, and electricity end-user facilities shall each coordinate and cooperate on its assessments with its Transmission Planner and Planning Authority. The assessment shall include: **R1.1.** Evaluation of the reliability impact of the new facilities and their connections on the interconnected transmission systems. **R1.2.** Ensurance of compliance with NERC Reliability Standards and applicable Regional, subregional, Power Pool, and individual system	FAC-002-2 R1, R2, R3, and R4	R1 was separated into five requirements to add clarity and better distinguish the actions required of the applicable entities and revised the Parts to remove elements that are more appropriate for Measures, resulting in four Parts in FAC-002-2 rather than five. FAC-002-1, R1, Parts 1.1, 1.2, 1.4, and 1.5 have largely been retained in FAC-002-2, R1, Parts 1.1, 1.2, 1.3, and 1.4. The first sentence of FAC-002-1, R1, Part 1.3 was deleted, and the second sentence was merged with the content of the new FAC-002-2, R1, Part 1.4.

Standard: FAC-002		
Requirement in Approved Standard (FAC-002-1)	**Translation to New Standard or Other Action**	**Comments**
planning criteria and facility connection requirements. **R1.3.** Evidence that the parties involved in the assessment have coordinated and cooperated on the assessment of the reliability impacts of new facilities on the interconnected transmission systems. While these studies may be performed independently, the results shall be jointly evaluated and coordinated by the entities involved. **R1.4.** Evidence that the assessment included steady-state, short-circuit, and dynamics studies as necessary to evaluate system performance under both normal and contingency conditions in accordance with Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0. **R1.5.** Documentation that the assessment included study assumptions, system performance, alternatives considered, and jointly coordinated recommendations.		
R2. The Planning Authority, Transmission Planner,	Retired	FAC-002-1, R2 has been deleted in the current version of

Standard: FAC-002		
Requirement in Approved Standard (FAC-002-1)	**Translation to New Standard or Other Action**	**Comments**
Generator Owner, Transmission Owner, Load-Serving Entity, and Distribution Provider shall each retain its documentation (of its evaluation of the reliability impact of the new facilities and their connections on the interconnected transmission systems) for three years and shall provide the documentation to the Regional Reliability Organization(s) and NERC on request (within 30 calendar days). (Retirement approved by FERC effective January 21, 2014.)		FAC-002 because it was approved by FERC for retirement effective January 21, 2014.

Project 2010-02: Connecting New Facilities to the Grid

VRF and VSL Justifications for FAC-001-2 and FAC-002-2

VRF and VSL Justifications – FAC-001-2, R1	
Proposed VRF	Lower
NERC VRF Discussion	While necessary for reliability, the requirements in FAC-001 are administrative in nature and take place in the planning horizon. A violation of FAC-001, R1 would not be expected to adversely affect the electrical state or capability of the Bulk Electric System or the ability to effectively monitor, control, or restore the Bulk Electric System.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* R3 of FAC-003-2, which requires documented maintenance strategies or procedures or processes or specifications and takes place in the planning horizon, is also assigned a Lower VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the obligations that are co-mingled in the requirement have equal reliability risk objectives.
Proposed Lower VSL	N/A
Proposed Moderate VSL	The Transmission Owner documented Facility interconnection requirements and updated them as needed, but failed to make them available upon request. OR The Transmission Owner documented Facility interconnection requirements and made them available upon request, but failed to update them as needed. OR

VRF and VSL Justifications – FAC-001-2, R1	
	The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for one of the Facilities as specified in R1, Parts 1.1, 1.2, or 1.3.
Proposed High VSL	The Transmission Owner documented Facility interconnection requirements, but failed to update them as needed and failed to make them available upon request. OR The Transmission Owner documented Facility interconnection requirements, updated them as needed, and made them available upon request, but failed to address interconnection requirements for two of the Facilities as specified in R1, Parts 1.1, 1.2, or 1.3.
Proposed Severe VSL	The Transmission Owner did not document Facility interconnection requirements.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.

VRF and VSL Justifications – FAC-001-2, R1	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-001-2, R2	
Proposed VRF	Lower
NERC VRF Discussion	While necessary for reliability, the requirements in FAC-001 are administrative in nature and take place in the planning horizon. A violation of FAC-001, R2 would not be expected to adversely affect the electrical state or capability of the Bulk Electric System or the ability to effectively monitor, control, or restore the Bulk Electric System.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* R3 of FAC-003-2, which requires documented maintenance strategies or procedures or processes or specifications and takes place in the planning horizon, is also assigned a Lower VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See “NERC VRF Discussion” above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the obligations that are co-mingled in the requirement have equal reliability risk objectives.
Proposed Lower VSL	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 45 calendar days but less than or equal to 60 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the Transmission system.
Proposed Moderate VSL	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 60 calendar days but less than or equal to 70 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner’s existing Facility that is used to interconnect to the Transmission system.

VRF and VSL Justifications – FAC-001-2, R2	
Proposed High VSL	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 70 calendar days but less than or equal to 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.
Proposed Severe VSL	The applicable Generator Owner failed to document Facility interconnection requirements and make them available upon request until more than 80 calendar days after full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.

VRF and VSL Justifications – FAC-001-2, R2	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-001-2, R3	
Proposed VRF	Lower
NERC VRF Discussion	While necessary for reliability, the requirements in FAC-001 are administrative in nature and take place in the planning horizon. A violation of FAC-001, R3 would not be expected to adversely affect the electrical state or capability of the Bulk Electric System or the ability to effectively monitor, control, or restore the Bulk Electric System.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* R3 of FAC-003-2, which requires documented maintenance strategies or procedures or processes or specifications and takes place in the planning horizon, is also assigned a Lower VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See “NERC VRF Discussion” above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the obligations that are co-mingled in the requirement have equal reliability risk objectives.
Proposed Lower VSL	N/A
Proposed Moderate VSL	N/A
Proposed High VSL	The Transmission Owner addressed either R3, Part 3.1 or Part 3.2 in its Facility interconnection requirements, but did not address both.
Proposed Severe VSL	The Transmission Owner addressed neither R3 Part 3.1 nor Part 3.2 in its Facility interconnection requirements.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.

VRF and VSL Justifications – FAC-001-2, R3	
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-001-2, R4	
Proposed VRF	Lower
NERC VRF Discussion	While necessary for reliability, the requirements in FAC-001 are administrative in nature and take place in the planning horizon. A violation of FAC-001, R4 would not be expected to adversely affect the electrical state or capability of the Bulk Electric System or the

VRF and VSL Justifications – FAC-001-2, R4	
	ability to effectively monitor, control, or restore the Bulk Electric System.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* R3 of FAC-003-2, which requires documented maintenance strategies or procedures or processes or specifications and takes place in the planning horizon, is also assigned a Lower VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the obligations that are co-mingled in the requirement have equal reliability risk objectives.
Proposed Lower VSL	N/A
Proposed Moderate VSL	N/A
Proposed High VSL	The applicable Generator Owner addressed either R4, Part 4.1 or Part 4.2 in its Facility interconnection requirements, but did not address both.
Proposed Severe VSL	The applicable Generator Owner addressed neither R4, Part 4.1 nor Part 4.2 in its Facility interconnection requirements.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.

VRF and VSL Justifications – FAC-001-2, R4	
in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R1	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly study the reliability impact of interconnecting new Facilities or materially modifying existing interconnections, and the other entities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities, but failed to study one of the Parts (R1, 1.1-1.4).
Proposed Moderate VSL	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities but failed to study two of the Parts (R1, 1.1-1.4).
Proposed High VSL	The Transmission Planner or Planning Coordinator studied the reliability impact of: (i) interconnecting new generation, transmission,

VRF and VSL Justifications – FAC-002-2, R1	
	or electricity end-user Facilities, and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities but failed to study three of the Parts (R1, 1.1-1.4).
Proposed Severe VSL	The Transmission Planner or Planning Coordinator failed to study the reliability impact of: interconnecting new generation, transmission, or electricity end-user Facilities, and (ii) materially modifying existing interconnections of, generation, transmission, or electricity end-user Facilities.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.

VRF and VSL Justifications – FAC-002-2, R1	
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R2	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly study the reliability impact of interconnecting new Facilities or materially modifying existing interconnections, and the other entities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).
Proposed Moderate VSL	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).

VRF and VSL Justifications – FAC-002-2, R2	
Proposed High VSL	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).
Proposed Severe VSL	The Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.
FERC VSL G3 Violation Severity Level Assignment Should Be	The language of the VSL directly mirrors the language in the corresponding requirement.

VRF and VSL Justifications – FAC-002-2, R2	
Consistent with the Corresponding Requirement	
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R3	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly study the reliability impact of interconnecting new Facilities or materially modifying existing interconnections, and the other entities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).
Proposed Moderate VSL	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning

VRF and VSL Justifications – FAC-002-2, R3	
	Coordinator, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).
Proposed High VSL	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).
Proposed Severe VSL	The Transmission Owner, Distribution Provider, or Load-Serving Entity seeking to interconnect new transmission Facilities or electricity end-user Facilities, or to materially modify existing interconnections of transmission Facilities or electricity end-user Facilities, failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.

VRF and VSL Justifications – FAC-002-2, R3	
Should Not Contain Ambiguous Language	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R4	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly study the reliability impact of interconnecting new Facilities or materially modifying existing interconnections, and the other entities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).
Proposed Moderate VSL	The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).
Proposed High VSL	The Transmission Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested

VRF and VSL Justifications – FAC-002-2, R4	
	new or materially modified interconnections to its Facilities, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).
Proposed Severe VSL	The Transmission Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested new or materially modified interconnections to its Facilities.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments Should Not Contain Ambiguous Language	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4	The VSL is assigned for a single instance of failing to comply with the requirement.

VRF and VSL Justifications – FAC-002-2, R4	
Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	

VRF and VSL Justifications – FAC-002-2, R5	
Proposed VRF	Medium
NERC VRF Discussion	If the planning entities did not properly study the reliability impact of interconnecting new Facilities or materially modifying existing interconnections, and the other entities involved did not coordinate and cooperate in those studies (such as by providing requested data), an interconnection that is not technically sound could be executed. Such an interconnection could directly affect the electrical state or the capability of the Bulk Electric System but would not be likely to directly lead to instability, separation, or Cascading.
FERC VRF G1 Discussion	*Guideline 1- Consistency w/ Blackout Report* This requirement does not address any of the critical areas identified in the Final Blackout Report.
FERC VRF G2 Discussion	*Guideline 2- Consistency within a Reliability Standard* Parts of a Reliability Standard are no longer assigned different VRFs.
FERC VRF G3 Discussion	*Guideline 3- Consistency among Reliability Standards* TPL-001-4 requires entities to conduct studies similar to the studies required in FAC-002, though the studies in TPL-001-4 are required after an interconnection has been made. The requirements related to conducting studies in TPL-001-4 are also assigned a Medium VRF.
FERC VRF G4 Discussion	*Guideline 4- Consistency with NERC Definitions of VRFs* See "NERC VRF Discussion" above.
FERC VRF G5 Discussion	*Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation* This guideline is not applicable, as the requirement does not co-mingle more than one obligation.
Proposed Lower VSL	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to

VRF and VSL Justifications – FAC-002-2, R5	
	provide data necessary to perform studies as described in one of the Parts (R1, 1.1-1.4).
Proposed Moderate VSL	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in two of the Parts (R1, 1.1-1.4).
Proposed High VSL	The applicable Generator Owner coordinated and cooperated on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities, but failed to provide data necessary to perform studies as described in three of the Parts (R1, 1.1-1.4).
Proposed Severe VSL	The applicable Generator Owner failed to coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator regarding requested interconnections to its Facilities.
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The VSLs do not lower the current level of compliance; they generally keep the same format as the VSLs in the currently enforceable version of the standard.
FERC VSL G2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Should Be Consistent Guideline 2b: Violation Severity Level Assignments	Guideline 2a: N/A Guideline 2b: The VSL assignment contains clear and unambiguous language.

VRF and VSL Justifications – FAC-002-2, R5	
Should Not Contain Ambiguous Language	
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The language of the VSL directly mirrors the language in the corresponding requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	The VSL is assigned for a single instance of failing to comply with the requirement.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Project 2010-02 Connecting New Facilities to the Grid FAC-001-2 and FAC-002-2

Final Ballots Now Open through June 23, 2014

Now Available

Final ballots for **FAC-001-2 – Facility Interconnection Requirements** and **FAC-002-2 – Facility Interconnection Studies** are now open through **8 p.m. Eastern on Monday, June 23, 2014**.

Background information for this project can be found on the project page.

Instructions for Balloting

In the final ballot, votes are counted by exception. Only members of the ballot pool may cast a ballot; all ballot pool members may change their previously cast votes. A ballot pool member who failed to cast a vote during the last ballot window may cast a vote in the final ballot window. If a ballot pool member cast a vote in the previous ballot and does not participate in the final ballot, that member's vote will be carried over in the final ballot.

Members of the ballot pool associated with this project may log in and submit their vote for the standards by clicking here.

RSAWs

The draft RSAWs are posted on the project page. Please submit comments regarding the draft RSAWs to RSAWfeedback@nerc.net. Feedback is due by **8 p.m. Eastern, Wednesday, June 25, 2014**.

Next Steps

Voting results for the standards will be posted and announced after the ballot window closes. If approved, they will be submitted to the Board of Trustees for adoption and then filed with the appropriate regulatory authorities.

For information on the **Standards Development Process**, please refer to the Standard Processes Manual.

For more information or assistance, please contact Wendy Muller, Standards Development Administrator, or at 404-446-2560.

North American Electric Reliability Corporation
3353 Peachtree Rd, NE
Suite 600, North Tower

Atlanta, GA 30326
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NERC
NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Reliability Standard Audit Worksheet[1]

FAC-001-2 – Facility Interconnection Requirements

This section to be completed by the Compliance Enforcement Authority.

Audit ID:	Audit ID if available; or REG-NCRnnnnn-YYYYMMDD
Registered Entity:	Registered name of entity being audited
NCR Number:	NCRnnnnn
Compliance Enforcement Authority:	Region or NERC performing audit
Compliance Assessment Date(s)[2]:	Month DD, YYYY, to Month DD, YYYY
Compliance Monitoring Method:	[On-site Audit | Off-site Audit | Spot Check]
Names of Auditors:	Supplied by CEA

Applicability of Requirements

	BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	RSG	TO	TOP	TP	TSP
R1												X			
R2			X[3]												
R3												X			
R4			X[3]												

Legend:

Text with blue background:	Fixed text – do not edit
Text entry area with Green background:	Entity-supplied information
Text entry area with white background:	Auditor-supplied information

[1] NERC developed this Reliability Standard Audit Worksheet (RSAW) language in order to facilitate NERC's and the Regional Entities' assessment of a registered entity's compliance with this Reliability Standard. The NERC RSAW language is written to specific versions of each NERC Reliability Standard. Entities using this RSAW should choose the version of the RSAW applicable to the Reliability Standard being assessed. While the information included in this RSAW provides some of the methodology that NERC has elected to use to assess compliance with the requirements of the Reliability Standard, this document should not be treated as a substitute for the Reliability Standard or viewed as additional Reliability Standard requirements. In all cases, the Regional Entity should rely on the language contained in the Reliability Standard itself, and not on the language contained in this RSAW, to determine compliance with the Reliability Standard. NERC's Reliability Standards can be found on NERC's website. Additionally, NERC Reliability Standards are updated frequently, and this RSAW may not necessarily be updated with the same frequency. Therefore, it is imperative that entities treat this RSAW as a reference document only, and not as a substitute or replacement for the Reliability Standard. It is the responsibility of the registered entity to verify its compliance with the latest approved version of the Reliability Standards, by the applicable governmental authority, relevant to its registration status.

The NERC RSAW language contained within this document provides a non-exclusive list, for informational purposes only, of examples of the types of evidence a registered entity may produce or may be asked to produce to demonstrate compliance with the Reliability Standard. A registered entity's adherence to the examples contained within this RSAW does not necessarily constitute compliance with the applicable Reliability Standard, and NERC and the Regional Entity using this RSAW reserves the right to request additional evidence from the registered entity that is not included in this RSAW. Additionally, this RSAW includes excerpts from FERC Orders and other regulatory references. The FERC Order cites are provided for ease of reference only, and this document does not necessarily include all applicable Order provisions. In the event of a discrepancy between FERC Orders, and the language included in this document, FERC Orders shall prevail.

[2] Compliance Assessment Date(s): The date(s) the actual compliance assessment (on-site audit, off-site spot check, etc.) occurs.

[3] Applicable Generator Owner: Generator Owner with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.

Findings

(This section to be completed by the Compliance Enforcement Authority)

Req.	Finding	Summary and Documentation	Functions Monitored
R1			
R2			
R3			
R4			

Req.	Areas of Concern

Req.	Recommendations

Req.	Positive Observations

DRAFT

Subject Matter Experts

Identify the Subject Matter Expert(s) responsible for this Reliability Standard.

Registered Entity Response (Required; Insert additional rows if needed):

SME Name	Title	Organization	Requirement(s)

DRAFT

R1 Supporting Evidence and Documentation

R1. Each Transmission Owner shall document Facility interconnection requirements, update them as needed, and make them available upon request. Each Transmission Owner's Facility interconnection requirements shall address interconnection requirements for:

1.1. Generation Facilities;

1.2. Transmission Facilities; and

1.3. End-user Facilities.

M1. Each Transmission Owner shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R1.

Registered Entity Response (Required):
Question: Has entity received any request(s) (for Facilities seeking interconnection to the Bulk Electric System) to make Facility interconnection requirements available during the compliance assessment period?
☐ Yes, entity has received request(s) (for Facilities seeking interconnection to the Bulk Electric System) to make Facility interconnection requirements available during the compliance assessment period.
☐ No, entity has not received request(s) (for Facilities seeking interconnection to the Bulk Electric System) to make Facility interconnection requirements available during the compliance assessment period.
☐ Other: [provide explanation below]

Registered Entity Response (Required):
Compliance Narrative:
Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested[i]:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated, documented Facility interconnection requirements.
Communication such as e-mails, letters, etc., of Facility interconnection requirements to requesting entity, if applicable.

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.					
File Name	**Document Title**	**Revision or Version**	**Document Date**	**Relevant Page(s)**	**Description of Applicability of Document**

				or Section(s)	

Audit Team Evidence Reviewed **(This section to be completed by the Compliance Enforcement Authority)**:

Compliance Assessment Approach Specific to FAC-001-2, R1
This section to be completed by the Compliance Enforcement Authority

	(R1) Review evidence and verify it addresses the following:
	(R1 Part 1.1) Generation Facilities
	(R1 Part 1.2) Transmission Facilities, and
	(R1 Part 1.3) End-user Facilities
	Review evidence and verify Facility interconnection requirements documentation has been updated, as needed.
	For each request for Facility interconnection requirements selected by the auditor, review evidence to verify these requirements were provided.
Note to Auditor: See Question to obtain instances of requests for Facility interconnection requirements made of entity. Select a sample of such requests for audit testing.	

Auditor Notes:

R2 Supporting Evidence and Documentation

R2. Each applicable Generator Owner shall document Facility interconnection requirements and make them available upon request within 45 calendar days of full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.

M2. Each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements) that it met all requirements in Requirement R2.

Registered Entity Response (Required):

Question: Has entity entered into an Agreement (during the compliance assessment period) to conduct a study on the reliability impact of interconnecting a third party Facility to one of this entity's existing Facilities that is used to interconnect to the interconnected Transmission system?

☐ Yes, entity has entered into an Agreement (during the compliance assessment period) to conduct a study on the reliability impact of interconnecting a third party Facility to one of this entity's existing Facilities that is used to interconnect to the interconnected Transmission system.

☐ No, entity has not entered into an Agreement (during the compliance assessment period) to conduct a study on the reliability impact of interconnecting a third party Facility to one of this entity's existing Facilities that is used to interconnect to the interconnected Transmission system.

☐ Other: [provide explanation below]

Question: Has entity received any request(s) to make Facility interconnection requirements available during the compliance assessment period?

☐ Yes, entity has received request(s) to make Facility interconnection requirements available during the compliance assessment period.

☐ No, entity has not received request(s) to make Facility interconnection requirements available during the compliance assessment period.

☐ Other: [provide explanation below]

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested[i]:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated, documented Facility interconnection requirements, if applicable.
Dated, documented Agreement(s) to conduct a study, if applicable.
Communication such as e-mails, letters, etc., of Facility interconnection requirements to third party, if applicable.

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.					
File Name	**Document Title**	**Revision or Version**	**Document Date**	**Relevant Page(s) or Section(s)**	**Description of Applicability of Document**

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to FAC-001-2, R2

This section to be completed by the Compliance Enforcement Authority

	For each Agreement to perform a study as described in Requirement R.2 as selected by the auditor, review evidence to verify requirements were documented in the specified timeframe and were made available upon request.
Note to Auditor: See Questions to obtain instances of Agreements to conduct a study and requests received by entity. Select a sample of such Agreements and requests for audit testing.	

Auditor Notes:

DRAFT

R3 Supporting Evidence and Documentation

R3. Each Transmission Owner shall address the following items in its Facility interconnection requirements:

3.1 Procedures for coordinated studies of new or materially modified Facilities and their impacts on affected system(s).

3.2 Procedures for notifying those responsible for the reliability of affected system(s) of new or materially modified Facilities.

M3. Each Transmission Owner shall have evidence (such as dated, documented Facility interconnection requirements addressing the procedures) that it met all requirements in Requirement R3.

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested[i]:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated, documented Facility interconnection requirements.

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.					
File Name	**Document Title**	**Revision or Version**	**Document Date**	**Relevant Page(s) or Section(s)**	**Description of Applicability of Document**

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to FAC-001-2, R3

This section to be completed by the Compliance Enforcement Authority

	(R3) Review evidence and verify it addresses the following:

	(R3 Part 3.1) Procedures for coordinated studies of new or materially modified Facilities and their impacts on affected system(s).
	(R3 Part 3.1) Procedures for notification of new or materially modified Facilities to those responsible for the reliability of affected system(s).
Note to Auditor: For information regarding what constitutes a "material modification" refer to the Guidelines and Technical Basis section of FAC-001-2.	

Auditor Notes:

DRAFT

R4 Supporting Evidence and Documentation

R4. Each applicable Generator Owner shall address the following items in its Facility interconnection requirements:

4.1 Procedures for coordinated studies of new Facilities and their impacts on affected system(s).
4.2 Procedures for notifying those responsible for the reliability of affected system(s) of new Facilities.

M4. Each applicable Generator Owner shall have evidence (such as dated, documented Facility interconnection requirements addressing the procedures) that it met all requirements in Requirement R4.

Registered Entity Response (Required):
Compliance Narrative:
Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested[i]:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated, documented Facility interconnection requirements.

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.					
File Name	**Document Title**	**Revision or Version**	**Document Date**	**Relevant Page(s) or Section(s)**	**Description of Applicability of Document**

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to FAC-001-2, R4
This section to be completed by the Compliance Enforcement Authority

	(R4) Review evidence and verify it addresses the following:
	(R4 Part 4.1) Procedures for coordinated studies of new Facilities and their impacts on affected system(s).
	(R4 Part 4.1) Procedures for notification of new Facilities to those responsible for the reliability of affected system(s).
Note to Auditor:	

Auditor Notes:

DRAFT

Additional Information:

Reliability Standard

The full text of FAC-001-2 may be found on the NERC Web Site (www.nerc.com) under "Program Areas & Departments", "Reliability Standards."

In addition to the Reliability Standard, there is an applicable Implementation Plan available on the NERC Web Site.

In addition to the Reliability Standard, there is background information available on the NERC Web Site.

Capitalized terms in the Reliability Standard refer to terms in the NERC Glossary, which may be found on the NERC Web Site.

Sampling Methodology [If developer deems reference applicable]
Sampling is essential for auditing compliance with NERC Reliability Standards since it is not always possible or practical to test 100% of either the equipment, documentation, or both, associated with the full suite of enforceable standards. The Sampling Methodology Guidelines and Criteria (see NERC website), or sample guidelines, provided by the Electric Reliability Organization help to establish a minimum sample set for monitoring and enforcement uses in audits of NERC Reliability Standards.

Regulatory Language [Developer to ensure RSAW has been provided to NERC Legal for links to appropriate Regulatory Language – See example below]

E.g. FERC Order No. 742 paragraph 34: "Based on NERC's…….

E.g. FERC Order No. 742 Paragraph 55, Commission Determination: "We affirm NERC's…….

Selected Glossary Terms [If developer deems applicable]
The following Glossary terms are provided for convenience only. Please refer to the NERC web site for the current enforceable terms.

Revision History for RSAW

Version	Date	Reviewers	Revision Description
1	06/10/2014	NERC Compliance	New Document

[i] Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.

DRAFT

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Reliability Standard Audit Worksheet[1]

FAC-002-2 – Facility Interconnection Studies

This section to be completed by the Compliance Enforcement Authority.

Audit ID:	Audit ID if available; or REG-NCRnnnnn-YYYYMMDD
Registered Entity:	Registered name of entity being audited
NCR Number:	NCRnnnnn
Compliance Enforcement Authority:	Region or NERC performing audit
Compliance Assessment Date(s)[2]:	Month DD, YYYY, to Month DD, YYYY
Compliance Monitoring Method:	[On-site Audit | Off-site Audit | Spot Check]
Names of Auditors:	Supplied by CEA

Applicability of Requirements

	BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	RSG	TO	TOP	TP	TSP
R1							X							X	
R2			X												
R3		X				X						X			
R4												X			
R5			X[3]												

Legend:

Text with blue background:	Fixed text – do not edit
Text entry area with Green background:	Entity-supplied information
Text entry area with white background:	Auditor-supplied information

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The NERC RSAW language contained within this document provides a non-exclusive list, for informational purposes only, of examples of the types of evidence a registered entity may produce or may be asked to produce to demonstrate compliance with the Reliability Standard. A registered entity's adherence to the examples contained within this RSAW does not necessarily constitute compliance with the applicable Reliability Standard, and NERC and the Regional Entity using this RSAW reserves the right to request additional evidence from the registered entity that is not included in this RSAW. Additionally, this RSAW includes excerpts from FERC Orders and other regulatory references. The FERC Order cites are provided for ease of reference only, and this document does not necessarily include all applicable Order provisions. In the event of a discrepancy between FERC Orders, and the language included in this document, FERC Orders shall prevail.

[2] Compliance Assessment Date(s): The date(s) the actual compliance assessment (on-site audit, off-site spot check, etc.) occurs.

[3] Applicable Generator Owner: Generator Owner with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third party Facility to the Generator Owner's existing Facility that is used to interconnect to the interconnected Transmission systems.

Findings

(This section to be completed by the Compliance Enforcement Authority)

Req.	Finding	Summary and Documentation	Functions Monitored
R1			
R2			
R3			
R4			
R5			

Req.	Areas of Concern

Req.	Recommendations

Req.	Positive Observations

DRAFT

Subject Matter Experts

Identify the Subject Matter Expert(s) responsible for this Reliability Standard.

Registered Entity Response (Required; Insert additional rows if needed):

SME Name	Title	Organization	Requirement(s)

DRAFT

R1 Supporting Evidence and Documentation

R1. Each Transmission Planner and each Planning Coordinator shall study the reliability impact of interconnecting new, or materially modifying existing, generation, transmission, or electricity end-user Facilities, including:

1.1. The reliability impact of the new, or materially modified existing, Facilities on affected system(s);

1.2. Adherence to applicable NERC Reliability Standards; regional and Transmission Owner planning criteria; and Facility interconnection requirements;

1.3. Steady-state, short-circuit, and dynamics studies, as necessary, to evaluate system performance under both normal and contingency conditions; and

1.4. Study assumptions, system performance, alternatives considered, and coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.

M1. Each Transmission Planner or each Planning Coordinator shall have evidence (such as study reports, including documentation of reliability issues) that it met all requirements in Requirement R1.

Registered Entity Response (Required):

Compliance Narrative:

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested[i]:

Provide the following evidence, or other evidence to demonstrate compliance.
List of studies associated with Requirement R1 performed during the compliance monitoring period.
Studies and/or reports that meet the requirements in Requirement R1.

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.					
File Name	**Document Title**	**Revision or Version**	**Document Date**	**Relevant Page(s) or Section(s)**	**Description of Applicability of Document**

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to FAC-002-2, R1

This section to be completed by the Compliance Enforcement Authority

	(R1) For a sample selected by auditor, review evidence and verify it addresses the following:
	(R1 Part 1.1) The reliability impact of the new, or materially modified existing, Facilities on affected system(s);
	(R1 Part 1.2) Adherence to applicable NERC Reliability Standards; regional and Transmission Owner planning criteria; and Facility interconnection requirements;
	(R1 Part 1.3) Steady-state, short-circuit, and dynamics studies, as necessary, to evaluate system performance under both normal and contingency conditions; and
	(R1 Part 1.4) Study assumptions, system performance, alternatives considered, and coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.
Note to Auditor: For information regarding what constitutes a "material modification" refer to the Guidelines and Technical Basis section of FAC-002-2.	

Auditor Notes:

DRAFT

R2 Supporting Evidence and Documentation

R2. Each Generator Owner seeking to interconnect new, or materially modify existing, generation Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1, Parts 1.1-1.4.

M2. Each Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R2.

Registered Entity Response (Required):
Question: Has entity sought to interconnect new, or materially modified existing, generation Facilities during the compliance monitoring period?
☐ Yes, entity has sought to interconnect new, or materially modified existing, generation Facilities during the compliance monitoring period.
☐ No, entity has not sought to interconnect new, or materially modified existing, generation Facilities during the compliance monitoring period.
☐ Other: [provide explanation below]

Registered Entity Response (Required):
Compliance Narrative:
Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested[i]:

Provide the following evidence, or other evidence to demonstrate compliance.
Data and information provided in response to the requests of the Transmission Planner or Planning Coordinator.

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.					
File Name	**Document Title**	**Revision or Version**	**Document Date**	**Relevant Page(s) or Section(s)**	**Description of Applicability of Document**

Audit Team Evidence Reviewed **(This section to be completed by the Compliance Enforcement Authority)**:

Compliance Assessment Approach Specific to FAC-002-2, R2
This section to be completed by the Compliance Enforcement Authority

	For a sample selected by auditor, review evidence and verify entity coordinated and cooperated with Transmission Planner or Planning Coordinator.
Note to Auditor: See Question to obtain instances of applicable interconnection requests for audit testing. Select a sample of such requests for audit testing. If auditor can obtain reasonable assurance that answer to question is NO, then no further audit testing of this requirement is necessary.	

Auditor Notes:

DRAFT

R3 Supporting Evidence and Documentation

R3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity seeking to interconnect new, or materially modify existing, transmission Facilities or electricity end-user Facilities shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1, Parts 1.1-1.4.

M3. Each Transmission Owner, each Distribution Provider, and each Load-Serving Entity shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R3.

Registered Entity Response (Required):
Question: Has entity sought to interconnect new, or materially modified existing, transmission Facilities or electricity end-user Facilities during the compliance monitoring period?
☐ Yes, entity has sought to interconnect new, or materially modified existing, transmission Facilities or electricity end-user Facilities during the compliance monitoring period.
☐ No, entity has not sought to interconnect new, or materially modified existing, transmission Facilities or electricity end-user Facilities during the compliance monitoring period.
☐ Other: [provide explanation below]

Registered Entity Response (Required):
Compliance Narrative:
Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested[i]:

Provide the following evidence, or other evidence to demonstrate compliance.
Data and information provided in response to the requests of the Transmission Planner or Planning Coordinator.

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.					
File Name	**Document Title**	**Revision or Version**	**Document Date**	**Relevant Page(s) or Section(s)**	**Description of Applicability of Document**

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to FAC-002-2, R3

This section to be completed by the Compliance Enforcement Authority

	For a sample selected by auditor, review evidence and verify entity coordinated and cooperated with Transmission Planner or Planning Coordinator.
Note to Auditor: See Question to obtain instances of applicable interconnection requests for audit testing. Select a sample of such requests for audit testing. If auditor can obtain reasonable assurance that answer to question is NO, then no further audit testing of this requirement is necessary.	

Auditor Notes:

DRAFT

R4 Supporting Evidence and Documentation

R4. Each Transmission Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested new or materially modified interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts 1.1-1.4.

M4. Each Transmission Owner and each applicable Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R4.

Registered Entity Response (Required):
Question: Has entity received any request(s) regarding new or materially modified interconnections to its Facilities during the compliance monitoring period?
☐ Yes, entity has received request(s) regarding new or materially modified interconnections to its Facilities during the compliance monitoring period?
☐ No, entity has not received request(s) regarding new or materially modified interconnections to its Facilities during the compliance monitoring period?
☐ Other: [provide explanation below]

Registered Entity Response (Required):
Compliance Narrative:
Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested[i]:

Provide the following evidence, or other evidence to demonstrate compliance.
Data and information provided in response to the requests of the Transmission Planner or Planning Coordinator.

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.					
File Name	**Document Title**	**Revision or Version**	**Document Date**	**Relevant Page(s) or Section(s)**	**Description of Applicability of Document**

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to FAC-002-2, R4
This section to be completed by the Compliance Enforcement Authority

	For a sample selected by auditor, review evidence and verify entity coordinated and cooperated with Transmission Planner or Planning Coordinator.
Note to Auditor: See Question to obtain instances of applicable interconnection requests for audit testing. Select a sample of such requests for audit testing. If auditor can obtain reasonable assurance that answer to question is NO, then no further audit testing of this requirement is necessary.	

Auditor Notes:

DRAFT

R5 Supporting Evidence and Documentation

R5. Each applicable Generator Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts 1.1-1.4.

M5. Each applicable Generator Owner shall have evidence (such as documents containing the data provided in response to the requests of the Transmission Planner or Planning Coordinator) that it met all requirements in Requirement R5.

Registered Entity Response (Required):
Question: Has entity received any request(s) to interconnect to its Facilities during the compliance monitoring period?
☐ Yes, entity has received request(s) to interconnect to its Facilities during the compliance monitoring period.
☐ No, entity has not received request(s) to interconnect to its Facilities during the compliance monitoring period.
☐ Other: [provide explanation below]

Registered Entity Response (Required):
Compliance Narrative:
Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested[i]:

Provide the following evidence, or other evidence to demonstrate compliance.
Data and information provided in response to the requests of the Transmission Planner or Planning Coordinator.

Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.					
File Name	**Document Title**	**Revision or Version**	**Document Date**	**Relevant Page(s) or Section(s)**	**Description of Applicability of Document**

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to FAC-002-2, R5
This section to be completed by the Compliance Enforcement Authority

	For a sample selected by auditor, review evidence and verify entity coordinated and cooperated with Transmission Planner or Planning Coordinator.
Note to Auditor: See Question to obtain instances of applicable interconnection requests for audit testing. Select a sample of such requests for audit testing. If auditor can obtain reasonable assurance that answer to question is NO, then no further audit testing of this requirement is necessary.	

Auditor Notes:

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Additional Information:

Reliability Standard

The full text of FAC-002-2 may be found on the NERC Web Site (www.nerc.com) under "Program Areas & Departments", "Reliability Standards."

In addition to the Reliability Standard, there is an applicable Implementation Plan available on the NERC Web Site.

In addition to the Reliability Standard, there is background information available on the NERC Web Site.

Capitalized terms in the Reliability Standard refer to terms in the NERC Glossary, which may be found on the NERC Web Site.

Sampling Methodology [If developer deems reference applicable]
Sampling is essential for auditing compliance with NERC Reliability Standards since it is not always possible or practical to test 100% of either the equipment, documentation, or both, associated with the full suite of enforceable standards. The Sampling Methodology Guidelines and Criteria (see NERC website), or sample guidelines, provided by the Electric Reliability Organization help to establish a minimum sample set for monitoring and enforcement uses in audits of NERC Reliability Standards.

Regulatory Language [Developer to ensure RSAW has been provided to NERC Legal for links to appropriate Regulatory Language – See example below]

E.g. FERC Order No. 742 paragraph 34: "Based on NERC's…….

E.g. FERC Order No. 742 Paragraph 55, Commission Determination: "We affirm NERC's…….

Selected Glossary Terms [If developer deems applicable]
The following Glossary terms are provided for convenience only. Please refer to the NERC web site for the current enforceable terms.

Revision History for RSAW

Version	Date	Reviewers	Revision Description
1	06/10/2014	NERC Compliance	New Document

[i] Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.

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NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Announcement

Project 2010-02 Connecting New Facilities to the Grid FAC-001-2 and FAC-002-2

Final Ballot Results

Now Available

Final ballots for **FAC-001-2 – Facility Interconnection Requirements** and **FAC-002-2 – Facility Interconnection Studies** concluded at **8 p.m. Eastern on Monday, June 23, 2014.**

The standards achieved a quorum and sufficient affirmative votes for approval. Voting statistics are listed below, and the Ballot Results page provides a link to the detailed results for the ballots.

Standards	Quorum / Approval
FAC-001-2	88.78% / 86.23%
FAC-002-2	89.03% / 83.46%

Background information for this project can be found on the project page.

Next Steps

The standards will be submitted to the Board of Trustees for adoption and then filed with the appropriate regulatory authorities.

For information on the **Standards Development Process**, please refer to the Standard Processes Manual.

For more information or assistance, please contact Mallory Huggins, Standards Developer, or at 202-644-8062.

North American Electric Reliability Corporation
3353 Peachtree Rd, NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

Ballot Results	
Ballot Name:	Project 2010-02 Facilities Interconnection FAC-001-1_fl
Ballot Period:	6/12/2014 - 6/23/2014
Ballot Type:	Final
Total # Votes:	356
Total Ballot Pool:	401
Quorum:	**88.78 % The Quorum has been reached**
Weighted Segment Vote:	86.23 %
Ballot Results:	**A quorum was reached and there were sufficient affirmative votes for approval.**

Summary of Ballot Results

Segment	Ballot Pool	Segment Weight	Affirmative # Votes	Affirmative Fraction	Negative # Votes	Negative Fraction	Negative Vote without a Comment	Abstain	No Vote
1 - Segment 1	110	1	69	0.831	14	0.169	0	14	13
2 - Segment 2	9	0.7	6	0.6	1	0.1	0	2	0
3 - Segment 3	85	1	60	0.882	8	0.118	0	8	9
4 - Segment 4	31	1	19	0.76	6	0.24	0	4	2
5 - Segment 5	91	1	57	0.864	9	0.136	0	11	14
6 - Segment 6	56	1	41	0.872	6	0.128	0	4	5
7 - Segment 7	2	0.2	2	0.2	0	0	0	0	0
8 - Segment 8	5	0.4	4	0.4	0	0	0	0	1
9 - Segment 9	3	0.1	1	0.1	0	0	0	1	1

10 - Segment 10	9	0.8	7	0.7	1	0.1	0	1	0
Totals	**401**	**7.2**	**266**	**6.209**	**45**	**0.991**	**0**	**45**	**45**

Individual Ballot Pool Results

Segment	Organization	Member	Ballot	NERC Notes
1	Ameren Services	Eric Scott	Negative	SUPPORTS THIRD PARTY COMMENTS
1	American Electric Power	Paul B Johnson	Negative	SUPPORTS THIRD PARTY COMMENTS
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman		
1	Austin Energy	James Armke	Affirmative	
1	Avista Utilities	Heather Rosentrater	Affirmative	
1	Balancing Authority of Northern California	Kevin Smith	Affirmative	
1	Baltimore Gas & Electric Company	Christopher J Scanlon	Affirmative	
1	Basin Electric Power Cooperative	David Rudolph		
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	
1	Black Hills Corp	Wes Wingen	Abstain	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Affirmative	
1	Central Electric Power Cooperative	Michael B Bax	Affirmative	
1	Central Iowa Power Cooperative	Kevin J Lyons	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Central Maine Power Company	Joseph Turano Jr.	Affirmative	
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Tallahassee	Daniel S Langston	Affirmative	
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Cleco Power LLC	Danny McDaniel	Abstain	
1	Colorado Springs Utilities	Shawna Speer	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	CPS Energy	Glenn Pressler	Affirmative	
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Deseret Power	James Tucker	Abstain	
1	Dominion Virginia Power	Larry Nash	Negative	
1	Duke Energy Carolina	Doug E Hils	Affirmative	
1	Empire District Electric Co.	Ralph F Meyer	Affirmative	
1	Encari	Steven E Hamburg		
1	Entergy Transmission	Oliver A Burke	Affirmative	
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton		
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	FortisBC	Curtis Klashinsky		
1	Gainesville Regional Utilities	Richard Bachmeier	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Georgia Transmission Corporation	Jason Snodgrass	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Muhammed Ali	Affirmative	
1	Hydro-Quebec TransEnergie	Martin Boisvert	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Idaho Power Company	Molly Devine	Affirmative	
1	International Transmission Company Holdings Corp	Michael Moltane	Affirmative	
1	JDRJC Associates	Jim D Cyrulewski	Affirmative	

1	JEA	Ted E Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon		
1	Kansas City Power & Light Co.	Daniel Gibson	Affirmative	
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Lee County Electric Cooperative	John Chin	Abstain	
1	Lincoln Electric System	Doug Bantam		
1	Long Island Power Authority	Robert Ganley		
1	Los Angeles Department of Water & Power	John Burnett	Abstain	
1	Lower Colorado River Authority	Martyn Turner	Affirmative	
1	M & A Electric Power Cooperative	William Price	Affirmative	
1	Manitoba Hydro	Jo-Anne M Ross	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	Minnkota Power Coop. Inc.	Daniel L Inman	Affirmative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Affirmative	
1	National Grid USA	Michael Jones	Negative	
1	NB Power Corporation	Alan MacNaughton	Abstain	
1	New York Power Authority	Bruce Metruck	Affirmative	
1	Northeast Missouri Electric Power Cooperative	Kevin White	Abstain	
1	Northeast Utilities	William Temple	Affirmative	
1	Northern Indiana Public Service Co.	Julaine Dyke	Affirmative	
1	NorthWestern Energy	John Canavan	Affirmative	
1	Ohio Valley Electric Corp.	Scott R Cunningham	Negative	SUPPORTS THIRD PARTY COMMENTS- Thomas Foltz of American Electric Power.
1	Oklahoma Gas and Electric Co.	Terri Pyle	Affirmative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Affirmative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson	Affirmative	
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan	Affirmative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	John T Walker	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams	Abstain	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Puget Sound Energy, Inc.	Denise M Lietz	Abstain	
1	Rochester Gas and Electric Corp.	John C. Allen	Abstain	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	San Diego Gas & Electric	Will Speer	Abstain	
1	SaskPower	Wayne Guttormson		
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Seminole Electric Cooperative, Inc.	Glenn Spurlock	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens		
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South Carolina Electric & Gas Co.	Tom Hanzlik	Abstain	
1	South Carolina Public Service Authority	Shawn T Abrams	Abstain	
1	Southern California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Tampa Electric Co.	Beth Young	Affirmative	
1	Tennessee Valley Authority	Howell D Scott	Affirmative	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State Generation & Transmission Association, Inc.	Tracy Sliman	Negative	
1	Tucson Electric Power Co.	John Tolo	Affirmative	

1	U.S. Bureau of Reclamation	Richard T Jackson	Affirmative	
1	United Illuminating Co.	Jonathan Appelbaum	Negative	
1	Vermont Electric Power Company, Inc.	Kim Moulton	Affirmative	
1	Westar Energy	Allen Klassen	Affirmative	
1	Western Area Power Administration	Lloyd A Linke	Affirmative	
1	Wolverine Power Supply Coop., Inc.	Michelle Clements	Abstain	
1	Xcel Energy, Inc.	Gregory L Pieper	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Rich Vine	Abstain	
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Affirmative	
2	Independent Electricity System Operator	Leonard Kula	Affirmative	
2	ISO New England, Inc.	Matthew F Goldberg	Negative	
2	MISO	Marie Knox	Affirmative	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	stephanie monzon	Affirmative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Affirmative	
3	AEP	Michael E Deloach	Negative	SUPPORTS THIRD PARTY COMMENTS
3	Alabama Power Company	Robert S Moore	Affirmative	
3	Ameren Corp.	David J Jendras	Negative	COMMENT RECEIVED
3	APS	Sarah Kist	Affirmative	
3	Associated Electric Cooperative, Inc.	Todd Bennett	Affirmative	
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	Avista Corp.	Scott J Kinney	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blue Ridge Electric	James L Layton	Abstain	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Power Cooperative	Adam M Weber	Affirmative	
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Clewiston	Lynne Mila	Negative	SUPPORTS THIRD PARTY COMMENTS
3	City of Farmington	Linda R Jacobson	Abstain	
3	City of Green Cove Springs	Mark Schultz		
3	City of Redding	Bill Hughes	Affirmative	
3	City of Tallahassee	Bill R Fowler	Affirmative	
3	Colorado Springs Utilities	Jean Mueller	Affirmative	
3	ComEd	John Bee	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy Company	Gerald G Farringer	Affirmative	
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla	Abstain	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Dominion Resources, Inc.	Connie B Lowe	Negative	
3	DTE Electric	Kent Kujala	Affirmative	
3	El Paso Electric Company	Rhonda Bryant		
3	FirstEnergy Corp.	Cindy E Stewart	Affirmative	
3	Florida Keys Electric Cooperative	Tom B Anthony	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Negative	COMMENT RECEIVED
3	Florida Power & Light Co.	Summer C. Esquerre	Affirmative	
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Affirmative	
3	Hydro One Networks, Inc.	Ayesha Sabouba	Affirmative	
3	JEA	Garry Baker	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Affirmative	
3	Kansas City Power & Light Co.	Joshua D Bach	Affirmative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lee County Electric Cooperative	David A Hadzima		
3	Lincoln Electric System	Jason Fortik		
3	Los Angeles Department of Water & Power	Mike Anctil	Abstain	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	
3	M & A Electric Power Cooperative	Stephen D Pogue	Affirmative	

3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MEAG Power	Roger Brand	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Modesto Irrigation District	Jack W Savage		
3	Muscatine Power & Water	John S Bos	Affirmative	
3	National Grid USA	Brian E Shanahan	Negative	
3	Nebraska Public Power District	Tony Eddleman	Affirmative	
3	New York Power Authority	David R Rivera	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann		
3	Northern Indiana Public Service Co.	Ramon J Barany	Affirmative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Affirmative	
3	Ocala Utility Services	Randy Hahn	Negative	SUPPORTS THIRD PARTY COMMENTS
3	Oklahoma Gas and Electric Co.	Donald Hargrove	Affirmative	
3	Omaha Public Power District	Blaine R. Dinwiddie	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Affirmative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	PNM Resources	Michael Mertz	Abstain	
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Potomac Electric Power Co.	Mark Yerger	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Puget Sound Energy, Inc.	Mariah R Kennedy	Abstain	
3	Rutherford EMC	Thomas Haire	Abstain	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Abstain	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas		
3	Snohomish County PUD No. 1	Mark Oens	Affirmative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Affirmative	
3	Southern California Edison Company	Lujuanna Medina	Affirmative	
3	Tacoma Power	Marc Donaldson	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Affirmative	
3	Tri-State Generation & Transmission Association, Inc.	Janelle Marriott	Negative	
3	Westar Energy	Bo Jones	Affirmative	
3	Wisconsin Electric Power Marketing	James R Keller	Affirmative	
3	Xcel Energy, Inc.	Michael Ibold	Affirmative	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Abstain	
4	Constellation Energy Control & Dispatch, L.L.C.	Margaret Powell	Abstain	
4	Consumers Energy Company	Tracy Goble	Affirmative	
4	Cowlitz County PUD	Rick Syring	Affirmative	
4	DTE Electric	Daniel Herring	Affirmative	
4	Flathead Electric Cooperative	Russ Schneider	Affirmative	
4	Florida Municipal Power Agency	Frank Gaffney	Negative	
4	Fort Pierce Utilities Authority	Cairo Vanegas	Negative	SUPPORTS THIRD PARTY COMMENTS
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Herb Schrayshuen	Herb Schrayshuen	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative	
4	Indiana Municipal Power Agency	Jack Alvey	Abstain	
4	Integrys Energy Group, Inc.	Christopher Plante	Affirmative	
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	
4	Modesto Irrigation District	Spencer Tacke	Negative	COMMENT RECEIVED
4	North Carolina Electric Membership Corp.	John Lemire	Negative	SUPPORTS THIRD PARTY COMMENTS

4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Abstain	
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	South Mississippi Electric Power Association	Steve McElhaney	Negative	SUPPORTS THIRD PARTY COMMENTS
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Utility Services, Inc.	Brian Evans-Mongeon	Negative	SUPPORTS THIRD PARTY COMMENTS
4	Wisconsin Energy Corp.	Anthony Jankowski		
4	WPPI Energy	Todd Komplin		
5	Amerenue	Sam Dwyer	Negative	SUPPORTS THIRD PARTY COMMENTS
5	American Electric Power	Thomas Foltz	Negative	COMMENT RECEIVED
5	Arizona Public Service Co.	Scott Takinen	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Affirmative	
5	Avista Corp.	Steve Wenke		
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
5	Black Hills Corp	George Tatar		
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	
5	Calpine Corporation	Hamid Zakery		
5	City and County of San Francisco	Daniel Mason	Affirmative	
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Redding	Paul A. Cummings	Affirmative	
5	City of Tallahassee	Karen Webb	Affirmative	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman	Abstain	
5	Cogentrix Energy Power Management, LLC	Mike D Hirst		
5	Colorado Springs Utilities	Kaleb Brimhall	Affirmative	
5	Con Edison Company of New York	Brian O'Boyle	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Affirmative	
5	Cowlitz County PUD	Bob Essex	Affirmative	
5	Dairyland Power Coop.	Tommy Drea	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Negative	
5	DTE Electric	Mark Stefaniak	Affirmative	
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	EDP Renewables North America LLC	Heather Bowden	Abstain	
5	El Paso Electric Company	Gustavo Estrada		
5	Electric Power Supply Association	John R Cashin		
5	Entergy Services, Inc.	Tracey Stubbs	Affirmative	
5	Exelon Nuclear	Mark F Draper	Affirmative	
5	First Wind	John Robertson	Affirmative	
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Negative	COMMENT RECEIVED
5	Great River Energy	Preston L Walsh	Affirmative	
5	Hydro-Québec Production	Roger Dufresne	Abstain	
5	Ingleside Cogeneration LP	Michelle R DAntuono	Affirmative	
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Affirmative	
5	Kissimmee Utility Authority	Mike Blough	Negative	SUPPORTS THIRD PARTY COMMENTS
5	Lakeland Electric	James M Howard	Negative	
5	Liberty Electric Power LLC	Daniel Duff	Affirmative	
5	Lincoln Electric System	Dennis Florom	Affirmative	
5	Los Angeles Department of Water & Power	Kenneth Silver	Abstain	

5	Lower Colorado River Authority	Dixie Wells	Affirmative	
5	Luminant Generation Company LLC	Rick Terrill	Affirmative	
5	Manitoba Hydro	Chris Mazur	Affirmative	COMMENT RECEIVED
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Affirmative	
5	New York Power Authority	Wayne Sipperly	Affirmative	
5	NextEra Energy	Allen D Schriver	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	
5	Northern Indiana Public Service Co.	Michael D Melvin	Affirmative	
5	Oglethorpe Power Corporation	Bernard Johnson	Affirmative	
5	Oklahoma Gas and Electric Co.	Henry L Staples	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard K Kinas		
5	Pacific Gas and Electric Company	Alex Chua	Affirmative	
5	Platte River Power Authority	Christopher R Wood	Affirmative	
5	Portland General Electric Co.	Matt E. Jastram		
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	PSEG Fossil LLC	Tim Kucey	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega		
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Abstain	
5	Puget Sound Energy, Inc.	Lynda Kupfer	Abstain	
5	Sacramento Municipal Utility District	Susan Gill-Zobitz	Affirmative	
5	Salt River Project	William Alkema	Affirmative	
5	Santee Cooper	Lewis P Pierce	Abstain	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins		
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic		
5	Southern California Edison Company	Denise Yaffe	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tacoma Power	Chris Mattson	Affirmative	
5	Tampa Electric Co.	RJames Rocha		
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	Tri-State Generation & Transmission Association, Inc.	Mark Stein	Negative	COMMENT RECEIVED
5	U.S. Army Corps of Engineers	Melissa Kurtz	Abstain	
5	USDI Bureau of Reclamation	Erika Doot	Affirmative	
5	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman		
5	Westar Energy	Bryan Taggart	Affirmative	
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative	
5	Wisconsin Public Service Corp.	Scott E Johnson	Affirmative	
5	WPPI Energy	Steven Leovy		
5	Xcel Energy, Inc.	Mark A Castagneri	Affirmative	
6	AEP Marketing	Edward P. Cox	Negative	SUPPORTS THIRD PARTY COMMENTS
6	Ameren Missouri	Robert Quinlivan	Negative	COMMENT RECEIVED
6	APS	Randy A. Young	Abstain	
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa Martin	Affirmative	
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirchak	Abstain	
6	Colorado Springs Utilities	Shannon Fair	Affirmative	
6	Con Edison Company of New York	David Balban	Affirmative	
6	Constellation Energy Commodities Group	David J Carlson	Affirmative	
6	Dominion Resources, Inc.	Louis S. Slade	Negative	
6	Duke Energy	Greg Cecil	Affirmative	
6	FirstEnergy Solutions	Kevin Querry	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative	COMMENT RECEIVED

6	Florida Municipal Power Pool	Thomas Washburn	Negative	SUPPORTS THIRD PARTY COMMENTS
6	Florida Power & Light Co.	Silvia P Mitchell	Affirmative	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Negative	SUPPORTS THIRD PARTY COMMENTS
6	Lincoln Electric System	Eric Ruskamp	Affirmative	
6	Los Angeles Department of Water & Power	Brad Packer		
6	Lower Colorado River Authority	Michael Shaw	Affirmative	
6	Luminant Energy	Brenda Hampton	Affirmative	
6	Manitoba Hydro	Blair Mukanik	Affirmative	
6	Modesto Irrigation District	James McFall	Affirmative	
6	Muscatine Power & Water	John Stolley		
6	New York Power Authority	Saul Rojas	Affirmative	
6	Northern California Power Agency	Steve C Hill		
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson	Affirmative	
6	Oglethorpe Power Corporation	Donna Johnson	Affirmative	
6	Oklahoma Gas and Electric Co.	Jerry Nottnagel	Affirmative	
6	Omaha Public Power District	Douglas Collins	Affirmative	
6	PacifiCorp	Sandra L Shaffer	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	Portland General Electric Co.	Shawn P Davis	Affirmative	
6	Power Generation Services, Inc.	Stephen C Knapp		
6	Powerex Corp.	Gordon Dobson-Mack	Affirmative	
6	PPL EnergyPlus LLC	Elizabeth Davis	Affirmative	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Affirmative	
6	Salt River Project	William Abraham	Affirmative	
6	Santee Cooper	Michael Brown	Abstain	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	Kenn Backholm	Affirmative	
6	Southern California Edison Company	Joseph T Marone	Affirmative	
6	Southern Company Generation and Energy Marketing	John J. Ciza	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Affirmative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	
6	Westar Energy	Grant L Wilkerson	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	Peter Colussy	Affirmative	
7	Brickfield, Burchette, Ritts & Stone, P.C.	Thomas W Siegrist	Affirmative	
7	Occidental Chemical	Venona Greaff	Affirmative	
8		David L Kiguel	Affirmative	
8		Roger C Zaklukiewicz	Affirmative	
8		Debra R Warner		
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Volkmann Consulting, Inc.	Terry Volkmann	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Jerry M Maio		
9	New York State Public Service Commission	Diane J Barney	Abstain	
10	Florida Reliability Coordinating Council	Linda C Campbell	Affirmative	
10	Midwest Reliability Organization	Russel Mountjoy	Affirmative	
10	New York State Reliability Council	Alan Adamson	Negative	
10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	
10	ReliabilityFirst	Anthony E Jablonski	Abstain	
10	SERC Reliability Corporation	Joseph W Spencer	Affirmative	
10	Southwest Power Pool RE	Bob Reynolds	Affirmative	
10	Texas Reliability Entity, Inc.	Derrick Davis	Affirmative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Affirmative	

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Washington Office: 1325 G Street, N.W. : Suite 600 : Washington, DC 20005-3801

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Ballot Results	
Ballot Name:	Project 2010-02 Facility Interconnection Studies FAC-002-1_fl
Ballot Period:	6/12/2014 - 6/23/2014
Ballot Type:	Final
Total # Votes:	357
Total Ballot Pool:	401
Quorum:	**89.03 % The Quorum has been reached**
Weighted Segment Vote:	83.46 %
Ballot Results:	**A quorum was reached and there were sufficient affirmative votes for approval.**

Summary of Ballot Results

Segment	Ballot Pool	Segment Weight	Affirmative # Votes	Affirmative Fraction	Negative # Votes	Negative Fraction	Negative Vote without a Comment	Abstain	No Vote
1 - Segment 1	108	1	69	0.831	14	0.169	0	12	13
2 - Segment 2	9	0.8	5	0.5	3	0.3	0	1	0
3 - Segment 3	87	1	62	0.886	8	0.114	0	8	9
4 - Segment 4	31	1	19	0.76	6	0.24	0	4	2
5 - Segment 5	91	1	56	0.848	10	0.152	0	11	14
6 - Segment 6	56	1	40	0.851	7	0.149	0	4	5
7 - Segment 7	2	0.2	2	0.2	0	0	0	0	0
8 - Segment 8	4	0.4	4	0.4	0	0	0	0	0
9 - Segment 9	4	0.2	2	0.2	0	0	0	1	1

10 - Segment 10	9	0.8	7	0.7	1	0.1	0	1	0
Totals	**401**	**7.4**	**266**	**6.176**	**49**	**1.224**	**0**	**42**	**44**

Individual Ballot Pool Results

Segment	Organization	Member	Ballot	NERC Notes
1	Ameren Services	Eric Scott	Negative	SUPPORTS THIRD PARTY COMMENTS
1	American Electric Power	Paul B Johnson	Negative	SUPPORTS THIRD PARTY COMMENTS
1	American Transmission Company, LLC	Andrew Z Pusztai	Affirmative	
1	Arizona Public Service Co.	Robert Smith	Affirmative	
1	Associated Electric Cooperative, Inc.	John Bussman		
1	Austin Energy	James Armke	Affirmative	
1	Avista Utilities	Heather Rosentrater	Affirmative	
1	Balancing Authority of Northern California	Kevin Smith	Affirmative	
1	Baltimore Gas & Electric Company	Christopher J Scanlon	Affirmative	
1	Basin Electric Power Cooperative	David Rudolph		
1	BC Hydro and Power Authority	Patricia Robertson	Affirmative	
1	Black Hills Corp	Wes Wingen	Abstain	
1	Bonneville Power Administration	Donald S. Watkins	Affirmative	
1	Bryan Texas Utilities	John C Fontenot	Affirmative	
1	CenterPoint Energy Houston Electric, LLC	John Brockhan	Affirmative	
1	Central Electric Power Cooperative	Michael B Bax	Affirmative	
1	Central Iowa Power Cooperative	Kevin J Lyons	Negative	SUPPORTS THIRD PARTY COMMENTS
1	City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	Chang G Choi	Affirmative	
1	City of Tallahassee	Daniel S Langston	Affirmative	
1	Clark Public Utilities	Jack Stamper	Affirmative	
1	Colorado Springs Utilities	Shawna Speer	Affirmative	
1	Consolidated Edison Co. of New York	Christopher L de Graffenried	Affirmative	
1	CPS Energy	Glenn Pressler	Affirmative	
1	Dairyland Power Coop.	Robert W. Roddy	Affirmative	
1	Dayton Power & Light Co.	Hertzel Shamash		
1	Deseret Power	James Tucker	Abstain	
1	Dominion Virginia Power	Larry Nash	Negative	
1	Duke Energy Carolina	Doug E Hils	Affirmative	
1	Empire District Electric Co.	Ralph F Meyer	Affirmative	
1	Encari	Steven E Hamburg		
1	Entergy Transmission	Oliver A Burke	Affirmative	
1	FirstEnergy Corp.	William J Smith	Affirmative	
1	Florida Keys Electric Cooperative Assoc.	Dennis Minton		
1	Florida Power & Light Co.	Mike O'Neil	Affirmative	
1	FortisBC	Curtis Klashinsky		
1	Gainesville Regional Utilities	Richard Bachmeier	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Georgia Transmission Corporation	Jason Snodgrass	Affirmative	
1	Great River Energy	Gordon Pietsch	Affirmative	
1	Hoosier Energy Rural Electric Cooperative, Inc.	Bob Solomon		
1	Hydro One Networks, Inc.	Muhammed Ali	Affirmative	
1	Hydro-Quebec TransEnergie	Martin Boisvert	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Idaho Power Company	Molly Devine	Negative	
1	International Transmission Company Holdings Corp	Michael Moltane	Affirmative	
1	JDRJC Associates	Jim D Cyrulewski	Affirmative	
1	JEA	Ted E Hobson	Affirmative	
1	KAMO Electric Cooperative	Walter Kenyon		

1	Kansas City Power & Light Co.	Daniel Gibson	Affirmative	
1	Keys Energy Services	Stanley T Rzad		
1	Lakeland Electric	Larry E Watt	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Lee County Electric Cooperative	John Chin	Abstain	
1	Lincoln Electric System	Doug Bantam		
1	Long Island Power Authority	Robert Ganley		
1	Los Angeles Department of Water & Power	John Burnett	Abstain	
1	Lower Colorado River Authority	Martyn Turner	Affirmative	
1	M & A Electric Power Cooperative	William Price	Affirmative	
1	Manitoba Hydro	Jo-Anne M Ross	Affirmative	
1	MidAmerican Energy Co.	Terry Harbour	Affirmative	
1	Minnkota Power Coop. Inc.	Daniel L Inman	Affirmative	
1	N.W. Electric Power Cooperative, Inc.	Mark Ramsey	Affirmative	
1	National Grid USA	Michael Jones	Negative	
1	NB Power Corporation	Alan MacNaughton	Abstain	
1	New York Power Authority	Bruce Metruck	Affirmative	
1	Northeast Missouri Electric Power Cooperative	Kevin White	Abstain	
1	Northeast Utilities	William Temple	Affirmative	
1	Northern Indiana Public Service Co.	Julaine Dyke	Affirmative	
1	NorthWestern Energy	John Canavan	Affirmative	
1	Ohio Valley Electric Corp.	Scott R Cunningham	Negative	SUPPORTS THIRD PARTY COMMENTS- Thomas Foltz of American Electric Power.
1	Oklahoma Gas and Electric Co.	Terri Pyle	Affirmative	
1	Omaha Public Power District	Doug Peterchuck	Affirmative	
1	Oncor Electric Delivery	Jen Fiegel	Affirmative	
1	Orlando Utilities Commission	Brad Chase	Affirmative	
1	Otter Tail Power Company	Daryl Hanson	Affirmative	
1	Pacific Gas and Electric Company	Bangalore Vijayraghavan	Affirmative	
1	Platte River Power Authority	John C. Collins	Affirmative	
1	Portland General Electric Co.	John T Walker	Affirmative	
1	Potomac Electric Power Co.	David Thorne	Affirmative	
1	PPL Electric Utilities Corp.	Brenda L Truhe	Affirmative	
1	Public Service Company of New Mexico	Laurie Williams	Abstain	
1	Public Service Electric and Gas Co.	Kenneth D. Brown	Affirmative	
1	Puget Sound Energy, Inc.	Denise M Lietz	Abstain	
1	Rochester Gas and Electric Corp.	John C. Allen	Abstain	
1	Sacramento Municipal Utility District	Tim Kelley	Affirmative	
1	Salt River Project	Robert Kondziolka	Affirmative	
1	San Diego Gas & Electric	Will Speer	Affirmative	
1	SaskPower	Wayne Guttormson		
1	Seattle City Light	Pawel Krupa	Affirmative	
1	Seminole Electric Cooperative, Inc.	Glenn Spurlock	Affirmative	
1	Sho-Me Power Electric Cooperative	Denise Stevens		
1	Snohomish County PUD No. 1	Long T Duong	Affirmative	
1	South Carolina Electric & Gas Co.	Tom Hanzlik	Abstain	
1	South Carolina Public Service Authority	Shawn T Abrams	Abstain	
1	Southern California Edison Company	Steven Mavis	Affirmative	
1	Southern Company Services, Inc.	Robert A. Schaffeld	Affirmative	
1	Southern Illinois Power Coop.	William Hutchison	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Southwest Transmission Cooperative, Inc.	John Shaver	Negative	
1	Sunflower Electric Power Corporation	Noman Lee Williams	Negative	SUPPORTS THIRD PARTY COMMENTS
1	Tampa Electric Co.	Beth Young	Affirmative	
1	Tennessee Valley Authority	Howell D Scott	Affirmative	
1	Trans Bay Cable LLC	Steven Powell	Affirmative	
1	Tri-State Generation & Transmission Association, Inc.	Tracy Sliman	Affirmative	
1	Tucson Electric Power Co.	John Tolo	Affirmative	
1	U.S. Bureau of Reclamation	Richard T Jackson	Affirmative	
1	United Illuminating Co.	Jonathan Appelbaum	Negative	

1	Vermont Electric Power Company, Inc.	Kim Moulton	Affirmative	
1	Westar Energy	Allen Klassen	Affirmative	
1	Western Area Power Administration	Lloyd A Linke	Affirmative	
1	Wolverine Power Supply Coop., Inc.	Michelle Clements	Abstain	
1	Xcel Energy, Inc.	Gregory L Pieper	Affirmative	
2	BC Hydro	Venkataramakrishnan Vinnakota	Affirmative	
2	California ISO	Rich Vine	Negative	SUPPORTS THIRD PARTY COMMENTS
2	Electric Reliability Council of Texas, Inc.	Cheryl Moseley	Affirmative	
2	Independent Electricity System Operator	Leonard Kula	Affirmative	
2	ISO New England, Inc.	Matthew F Goldberg	Negative	
2	MISO	Marie Knox	Affirmative	
2	New York Independent System Operator	Gregory Campoli	Abstain	
2	PJM Interconnection, L.L.C.	stephanie monzon	Affirmative	
2	Southwest Power Pool, Inc.	Charles H. Yeung	Negative	
3	AEP	Michael E Deloach	Negative	SUPPORTS THIRD PARTY COMMENTS
3	Alabama Power Company	Robert S Moore	Affirmative	
3	Ameren Corp.	David J Jendras	Negative	COMMENT RECEIVED
3	APS	Sarah Kist	Affirmative	
3	Associated Electric Cooperative, Inc.	Todd Bennett	Affirmative	
3	Atlantic City Electric Company	NICOLE BUCKMAN	Affirmative	
3	Avista Corp.	Scott J Kinney	Affirmative	
3	BC Hydro and Power Authority	Pat G. Harrington	Affirmative	
3	Blue Ridge Electric	James L Layton	Abstain	
3	Bonneville Power Administration	Rebecca Berdahl	Affirmative	
3	Central Electric Power Cooperative	Adam M Weber	Affirmative	
3	Central Lincoln PUD	Steve Alexanderson	Affirmative	
3	City of Anaheim Public Utilities Department	Dennis M Schmidt	Abstain	
3	City of Austin dba Austin Energy	Andrew Gallo	Affirmative	
3	City of Clewiston	Lynne Mila	Negative	SUPPORTS THIRD PARTY COMMENTS
3	City of Farmington	Linda R Jacobson	Abstain	
3	City of Green Cove Springs	Mark Schultz		
3	City of Redding	Bill Hughes	Affirmative	
3	City of Tallahassee	Bill R Fowler	Affirmative	
3	Colorado Springs Utilities	Jean Mueller	Affirmative	
3	ComEd	John Bee	Affirmative	
3	Consolidated Edison Co. of New York	Peter T Yost	Affirmative	
3	Consumers Energy Company	Gerald G Farringer	Negative	
3	Cowlitz County PUD	Russell A Noble	Affirmative	
3	CPS Energy	Jose Escamilla	Abstain	
3	Delmarva Power & Light Co.	Michael R. Mayer	Affirmative	
3	Dominion Resources, Inc.	Connie B Lowe	Negative	
3	DTE Electric	Kent Kujala	Affirmative	
3	El Paso Electric Company	Rhonda Bryant		
3	FirstEnergy Corp.	Cindy E Stewart	Affirmative	
3	Florida Keys Electric Cooperative	Tom B Anthony	Affirmative	
3	Florida Municipal Power Agency	Joe McKinney	Negative	COMMENT RECEIVED
3	Florida Power & Light Co.	Summer C. Esquerre	Affirmative	
3	Florida Power Corporation	Lee Schuster	Affirmative	
3	Georgia System Operations Corporation	Scott McGough	Affirmative	
3	Great River Energy	Brian Glover	Affirmative	
3	Hydro One Networks, Inc.	Ayesha Sabouba	Affirmative	
3	JEA	Garry Baker	Affirmative	
3	KAMO Electric Cooperative	Theodore J Hilmes	Affirmative	
3	Kansas City Power & Light Co.	Joshua D Bach	Affirmative	
3	Kissimmee Utility Authority	Gregory D Woessner		
3	Lakeland Electric	Mace D Hunter	Affirmative	
3	Lee County Electric Cooperative	David A Hadzima		
3	Lincoln Electric System	Jason Fortik		
3	Los Angeles Department of Water & Power	Mike Anctil	Abstain	
3	Louisville Gas and Electric Co.	Charles A. Freibert	Affirmative	

3	M & A Electric Power Cooperative	Stephen D Pogue	Affirmative	
3	Manitoba Hydro	Greg C. Parent	Affirmative	
3	MEAG Power	Roger Brand	Affirmative	
3	MidAmerican Energy Co.	Thomas C. Mielnik	Affirmative	
3	Modesto Irrigation District	Jack W Savage		
3	Muscatine Power & Water	John S Bos	Affirmative	
3	National Grid USA	Brian E Shanahan	Negative	
3	Nebraska Public Power District	Tony Eddleman	Affirmative	
3	New York Power Authority	David R Rivera	Affirmative	
3	Northeast Missouri Electric Power Cooperative	Skyler Wiegmann		
3	Northern Indiana Public Service Co.	Ramon J Barany	Affirmative	
3	NW Electric Power Cooperative, Inc.	David McDowell	Affirmative	
3	Ocala Utility Services	Randy Hahn	Negative	SUPPORTS THIRD PARTY COMMENTS
3	Oklahoma Gas and Electric Co.	Donald Hargrove	Affirmative	
3	Omaha Public Power District	Blaine R. Dinwiddie	Affirmative	
3	Orlando Utilities Commission	Ballard K Mutters	Affirmative	
3	Owensboro Municipal Utilities	Thomas T Lyons	Affirmative	
3	Pacific Gas and Electric Company	John H Hagen	Affirmative	
3	Platte River Power Authority	Terry L Baker	Affirmative	
3	PNM Resources	Michael Mertz	Abstain	
3	Portland General Electric Co.	Thomas G Ward	Affirmative	
3	Potomac Electric Power Co.	Mark Yerger	Affirmative	
3	Public Service Electric and Gas Co.	Jeffrey Mueller	Affirmative	
3	Puget Sound Energy, Inc.	Mariah R Kennedy	Abstain	
3	Rutherford EMC	Thomas Haire	Affirmative	
3	Sacramento Municipal Utility District	James Leigh-Kendall	Affirmative	
3	Salt River Project	John T. Underhill	Affirmative	
3	Santee Cooper	James M Poston	Abstain	
3	Seattle City Light	Dana Wheelock	Affirmative	
3	Seminole Electric Cooperative, Inc.	James R Frauen	Affirmative	
3	Sho-Me Power Electric Cooperative	Jeff L Neas		
3	Snohomish County PUD No. 1	Mark Oens	Affirmative	
3	South Carolina Electric & Gas Co.	Hubert C Young	Affirmative	
3	Southern California Edison Company	Lujuanna Medina	Affirmative	
3	Tacoma Power	Marc Donaldson	Affirmative	
3	Tampa Electric Co.	Ronald L. Donahey		
3	Tennessee Valley Authority	Ian S Grant	Affirmative	
3	Tri-State Generation & Transmission Association, Inc.	Janelle Marriott	Affirmative	
3	Westar Energy	Bo Jones	Affirmative	
3	Wisconsin Electric Power Marketing	James R Keller	Affirmative	
3	Xcel Energy, Inc.	Michael Ibold	Affirmative	
4	Alliant Energy Corp. Services, Inc.	Kenneth Goldsmith	Affirmative	
4	Blue Ridge Power Agency	Duane S Dahlquist	Affirmative	
4	Central Lincoln PUD	Shamus J Gamache	Affirmative	
4	City of Austin dba Austin Energy	Reza Ebrahimian	Affirmative	
4	City of Redding	Nicholas Zettel	Affirmative	
4	City Utilities of Springfield, Missouri	John Allen	Abstain	
4	Constellation Energy Control & Dispatch, L.L.C.	Margaret Powell	Abstain	
4	Consumers Energy Company	Tracy Goble	Negative	
4	Cowlitz County PUD	Rick Syring	Affirmative	
4	DTE Electric	Daniel Herring	Affirmative	
4	Flathead Electric Cooperative	Russ Schneider	Affirmative	
4	Florida Municipal Power Agency	Frank Gaffney	Negative	
4	Fort Pierce Utilities Authority	Cairo Vanegas	Negative	SUPPORTS THIRD PARTY COMMENTS
4	Georgia System Operations Corporation	Guy Andrews	Affirmative	
4	Herb Schrayshuen	Herb Schrayshuen	Affirmative	
4	Illinois Municipal Electric Agency	Bob C. Thomas	Affirmative	
4	Indiana Municipal Power Agency	Jack Alvey	Abstain	
4	Integrys Energy Group, Inc.	Christopher Plante	Affirmative	
4	Madison Gas and Electric Co.	Joseph DePoorter	Affirmative	
4	Modesto Irrigation District	Spencer Tacke	Negative	COMMENT RECEIVED

4	Ohio Edison Company	Douglas Hohlbaugh	Affirmative	
4	Old Dominion Electric Coop.	Mark Ringhausen	Negative	SUPPORTS THIRD PARTY COMMENTS
4	Public Utility District No. 1 of Snohomish County	John D Martinsen	Affirmative	
4	Sacramento Municipal Utility District	Mike Ramirez	Affirmative	
4	Seattle City Light	Hao Li	Affirmative	
4	Seminole Electric Cooperative, Inc.	Steven R Wallace	Affirmative	
4	South Mississippi Electric Power Association	Steve McElhaney	Negative	SUPPORTS THIRD PARTY COMMENTS
4	Tacoma Public Utilities	Keith Morisette	Affirmative	
4	Utility Services, Inc.	Brian Evans-Mongeon	Abstain	
4	Wisconsin Energy Corp.	Anthony Jankowski		
4	WPPI Energy	Todd Komplin		
5	Amerenue	Sam Dwyer	Negative	SUPPORTS THIRD PARTY COMMENTS
5	American Electric Power	Thomas Foltz	Negative	COMMENT RECEIVED
5	Arizona Public Service Co.	Scott Takinen	Affirmative	
5	Associated Electric Cooperative, Inc.	Matthew Pacobit	Affirmative	
5	Avista Corp.	Steve Wenke		
5	BC Hydro and Power Authority	Clement Ma	Affirmative	
5	Black Hills Corp	George Tatar		
5	Boise-Kuna Irrigation District/dba Lucky peak power plant project	Mike D Kukla	Affirmative	
5	Bonneville Power Administration	Francis J. Halpin	Affirmative	
5	Brazos Electric Power Cooperative, Inc.	Shari Heino	Negative	
5	Calpine Corporation	Hamid Zakery		
5	City and County of San Francisco	Daniel Mason	Affirmative	
5	City of Austin dba Austin Energy	Jeanie Doty	Affirmative	
5	City of Redding	Paul A. Cummings	Affirmative	
5	City of Tallahassee	Karen Webb	Affirmative	
5	City Water, Light & Power of Springfield	Steve Rose	Affirmative	
5	Cleco Power	Stephanie Huffman	Abstain	
5	Cogentrix Energy Power Management, LLC	Mike D Hirst		
5	Colorado Springs Utilities	Kaleb Brimhall	Affirmative	
5	Con Edison Company of New York	Brian O'Boyle	Affirmative	
5	Consumers Energy Company	David C Greyerbiehl	Negative	
5	Cowlitz County PUD	Bob Essex	Affirmative	
5	Dairyland Power Coop.	Tommy Drea	Affirmative	
5	Dominion Resources, Inc.	Mike Garton	Negative	
5	DTE Electric	Mark Stefaniak	Affirmative	
5	Duke Energy	Dale Q Goodwine	Affirmative	
5	Dynegy Inc.	Dan Roethemeyer	Affirmative	
5	E.ON Climate & Renewables North America, LLC	Dana Showalter	Abstain	
5	EDP Renewables North America LLC	Heather Bowden	Abstain	
5	El Paso Electric Company	Gustavo Estrada		
5	Electric Power Supply Association	John R Cashin		
5	Entergy Services, Inc.	Tracey Stubbs	Affirmative	
5	Exelon Nuclear	Mark F Draper	Affirmative	
5	First Wind	John Robertson	Affirmative	
5	FirstEnergy Solutions	Kenneth Dresner	Affirmative	
5	Florida Municipal Power Agency	David Schumann	Negative	COMMENT RECEIVED
5	Great River Energy	Preston L Walsh	Affirmative	
5	Hydro-Québec Production	Roger Dufresne	Abstain	
5	Ingleside Cogeneration LP	Michelle R DAntuono	Affirmative	
5	JEA	John J Babik	Affirmative	
5	Kansas City Power & Light Co.	Brett Holland	Affirmative	
5	Kissimmee Utility Authority	Mike Blough	Negative	SUPPORTS THIRD PARTY COMMENTS
5	Lakeland Electric	James M Howard	Negative	
5	Liberty Electric Power LLC	Daniel Duff	Affirmative	
5	Lincoln Electric System	Dennis Florom	Negative	COMMENT RECEIVED

5	Los Angeles Department of Water & Power	Kenneth Silver	Abstain	
5	Lower Colorado River Authority	Dixie Wells	Affirmative	
5	Luminant Generation Company LLC	Rick Terrill	Affirmative	
5	Manitoba Hydro	Chris Mazur	Affirmative	
5	Massachusetts Municipal Wholesale Electric Company	David Gordon	Abstain	
5	MEAG Power	Steven Grego	Affirmative	
5	Muscatine Power & Water	Mike Avesing	Affirmative	
5	Nebraska Public Power District	Don Schmit	Affirmative	
5	New York Power Authority	Wayne Sipperly	Affirmative	
5	NextEra Energy	Allen D Schriver	Affirmative	
5	North Carolina Electric Membership Corp.	Jeffrey S Brame	Negative	
5	Northern Indiana Public Service Co.	Michael D Melvin	Affirmative	
5	Oglethorpe Power Corporation	Bernard Johnson	Affirmative	
5	Oklahoma Gas and Electric Co.	Henry L Staples	Affirmative	
5	Omaha Public Power District	Mahmood Z. Safi	Affirmative	
5	Orlando Utilities Commission	Richard K Kinas		
5	Pacific Gas and Electric Company	Alex Chua	Affirmative	
5	Platte River Power Authority	Christopher R Wood	Affirmative	
5	Portland General Electric Co.	Matt E. Jastram		
5	PPL Generation LLC	Annette M Bannon	Affirmative	
5	PSEG Fossil LLC	Tim Kucey	Affirmative	
5	Public Utility District No. 1 of Lewis County	Steven Grega		
5	Public Utility District No. 2 of Grant County, Washington	Michiko Sell	Abstain	
5	Puget Sound Energy, Inc.	Lynda Kupfer	Abstain	
5	Sacramento Municipal Utility District	Susan Gill-Zobitz	Affirmative	
5	Salt River Project	William Alkema	Affirmative	
5	Santee Cooper	Lewis P Pierce	Abstain	
5	Seattle City Light	Michael J. Haynes	Affirmative	
5	Seminole Electric Cooperative, Inc.	Brenda K. Atkins		
5	Snohomish County PUD No. 1	Sam Nietfeld	Affirmative	
5	South Carolina Electric & Gas Co.	Edward Magic		
5	Southern California Edison Company	Denise Yaffe	Affirmative	
5	Southern Company Generation	William D Shultz	Affirmative	
5	Tacoma Power	Chris Mattson	Affirmative	
5	Tampa Electric Co.	RJames Rocha		
5	Tenaska, Inc.	Scott M. Helyer	Abstain	
5	Tennessee Valley Authority	David Thompson	Affirmative	
5	Tri-State Generation & Transmission Association, Inc.	Mark Stein	Affirmative	
5	U.S. Army Corps of Engineers	Melissa Kurtz	Abstain	
5	USDI Bureau of Reclamation	Erika Doot	Affirmative	
5	Utility System Effeciencies, Inc. (USE)	Robert L Dintelman		
5	Westar Energy	Bryan Taggart	Affirmative	
5	Wisconsin Electric Power Co.	Linda Horn	Affirmative	
5	Wisconsin Public Service Corp.	Scott E Johnson	Affirmative	
5	WPPI Energy	Steven Leovy		
5	Xcel Energy, Inc.	Mark A Castagneri	Affirmative	
6	AEP Marketing	Edward P. Cox	Negative	SUPPORTS THIRD PARTY COMMENTS
6	Ameren Missouri	Robert Quinlivan	Negative	COMMENT RECEIVED
6	APS	Randy A. Young	Abstain	
6	Associated Electric Cooperative, Inc.	Brian Ackermann	Affirmative	
6	Bonneville Power Administration	Brenda S. Anderson	Affirmative	
6	City of Austin dba Austin Energy	Lisa Martin	Affirmative	
6	City of Redding	Marvin Briggs	Affirmative	
6	Cleco Power LLC	Robert Hirchak	Abstain	
6	Colorado Springs Utilities	Shannon Fair	Affirmative	
6	Con Edison Company of New York	David Balban	Affirmative	
6	Constellation Energy Commodities Group	David J Carlson	Affirmative	
6	Dominion Resources, Inc.	Louis S. Slade	Negative	
6	Duke Energy	Greg Cecil	Affirmative	
6	FirstEnergy Solutions	Kevin Querry	Affirmative	
6	Florida Municipal Power Agency	Richard L. Montgomery	Negative	COMMENT RECEIVED

6	Florida Municipal Power Pool	Thomas Washburn	Negative	SUPPORTS THIRD PARTY COMMENTS
6	Florida Power & Light Co.	Silvia P Mitchell	Affirmative	
6	Great River Energy	Donna Stephenson		
6	Kansas City Power & Light Co.	Jessica L Klinghoffer	Affirmative	
6	Lakeland Electric	Paul Shipps	Negative	SUPPORTS THIRD PARTY COMMENTS
6	Lincoln Electric System	Eric Ruskamp	Negative	COMMENT RECEIVED
6	Los Angeles Department of Water & Power	Brad Packer		
6	Lower Colorado River Authority	Michael Shaw	Affirmative	
6	Luminant Energy	Brenda Hampton	Affirmative	
6	Manitoba Hydro	Blair Mukanik	Affirmative	
6	Modesto Irrigation District	James McFall	Affirmative	
6	Muscatine Power & Water	John Stolley		
6	New York Power Authority	Saul Rojas	Affirmative	
6	Northern California Power Agency	Steve C Hill		
6	Northern Indiana Public Service Co.	Joseph O'Brien	Affirmative	
6	NRG Energy, Inc.	Alan Johnson	Affirmative	
6	Oglethorpe Power Corporation	Donna Johnson	Affirmative	
6	Oklahoma Gas and Electric Co.	Jerry Nottnagel	Affirmative	
6	Omaha Public Power District	Douglas Collins	Affirmative	
6	PacifiCorp	Sandra L Shaffer	Affirmative	
6	Platte River Power Authority	Carol Ballantine	Affirmative	
6	Portland General Electric Co.	Shawn P Davis	Affirmative	
6	Power Generation Services, Inc.	Stephen C Knapp		
6	Powerex Corp.	Gordon Dobson-Mack	Affirmative	
6	PPL EnergyPlus LLC	Elizabeth Davis	Affirmative	
6	PSEG Energy Resources & Trade LLC	Peter Dolan	Affirmative	
6	Public Utility District No. 1 of Chelan County	Hugh A. Owen	Abstain	
6	Sacramento Municipal Utility District	Diane Enderby	Affirmative	
6	Salt River Project	William Abraham	Affirmative	
6	Santee Cooper	Michael Brown	Abstain	
6	Seattle City Light	Dennis Sismaet	Affirmative	
6	Seminole Electric Cooperative, Inc.	Trudy S. Novak	Affirmative	
6	Snohomish County PUD No. 1	Kenn Backholm	Affirmative	
6	Southern California Edison Company	Joseph T Marone	Affirmative	
6	Southern Company Generation and Energy Marketing	John J. Ciza	Affirmative	
6	Tacoma Public Utilities	Michael C Hill	Affirmative	
6	Tampa Electric Co.	Benjamin F Smith II	Affirmative	
6	Tennessee Valley Authority	Marjorie S. Parsons	Affirmative	
6	Westar Energy	Grant L Wilkerson	Affirmative	
6	Western Area Power Administration - UGP Marketing	Peter H Kinney	Affirmative	
6	Xcel Energy, Inc.	Peter Colussy	Affirmative	
7	Brickfield, Burchette, Ritts & Stone, P.C.	Thomas W Siegrist	Affirmative	
7	Occidental Chemical	Venona Greaff	Affirmative	
8		David L Kiguel	Affirmative	
8		Roger C Zaklukiewicz	Affirmative	
8	Massachusetts Attorney General	Frederick R Plett	Affirmative	
8	Volkmann Consulting, Inc.	Terry Volkmann	Affirmative	
9	Central Lincoln PUD	Bruce Lovelin	Affirmative	
9	Commonwealth of Massachusetts Department of Public Utilities	Donald Nelson	Affirmative	
9	National Association of Regulatory Utility Commissioners	Jerry M Maio		
9	New York State Public Service Commission	Diane J Barney	Abstain	
10	Florida Reliability Coordinating Council	Linda C Campbell	Affirmative	
10	Midwest Reliability Organization	Russel Mountjoy	Affirmative	
10	New York State Reliability Council	Alan Adamson	Negative	
10	Northeast Power Coordinating Council	Guy V. Zito	Affirmative	
10	ReliabilityFirst	Anthony E Jablonski	Abstain	
10	SERC Reliability Corporation	Joseph W Spencer	Affirmative	
10	Southwest Power Pool RE	Bob Reynolds	Affirmative	
10	Texas Reliability Entity, Inc.	Derrick Davis	Affirmative	
10	Western Electricity Coordinating Council	Steven L. Rueckert	Affirmative	

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Exhibit H

Standard Drafting Team Roster for Project 2010-02, Connecting New Facilities to the Grid

Project 2010-02 Connecting New Facilities to the Grid
Standard Drafting Team

Name and Title	Company and Address	Contact Info	Bio
Mike Steckelberg Chair	Great River Energy 12300 Elm Creek Boulevard Maple Grove, Minnesota 55369	763-445-5957 msteckelberg@grenergy.com	Mike Steckelberg is a senior transmission planning engineer with Great River Energy. He has been involved in the generator interconnection process at GRE since the late 1990s as transmission access has opened. Prior to when GRE joined MISO, he was responsible for the studies of new generator interconnections to the GRE-owned transmission system. Since GRE joined MISO, he has been involved in the review of the MISO-conducted studies for new generator interconnections as those interconnection affect the GRE-owned system and GRE cooperative members. Steckelberg is also responsible for the review of new generator interconnections to the GRE members' distribution system as they might impact the transmission network serving the distribution substation. This includes coordinating with the relay, protection, engineering and operating groups within GRE

			to determine whether a more comprehensive short circuit analysis is required. He has 35 years of transmission planning experience at the subregional and regional level, including leadership of the Northern MAPP Subregional Planning Group prior to the time when GRE joined MISO. Steckelberg has a B.S. in electrical engineering, with an emphasis in power systems, from the University of Minnesota.
Jeff Gindling Vice Chair	Duke Energy 139 East Fourth Street Cincinnati, OH 45202	513-287-3479 jeff.gindling@duke-energy.com	Jeff Gindling is a principal engineer for Duke Energy. He has over 25 years of experience in the utility industry. In his current role, he is the NERC Standards lead for Duke Energy's Midwest Transmission Planning, including self-certifications and audits for Midwest Planning. In addition, he is responsible for transmission interconnected generation projects, transmission system studies and assessments. He has extensive experience in transmission system planning and operations, modeling, simulations in both steady-state and stability analysis, project management,

			process improvement, regulatory filings, compliance, FERC/NERC standards and policies. Gindling participated as an observer on the NERC Project 2010-17 – Definition of Bulk Electric System (Phase 2) and was a member on the NERC Project 2010-03 – MOD B. He has a B.S. in electrical engineering technology from Northern Kentucky University, Highland Heights and is a registered Professional Engineer in Ohio.
Zakia El Omari	Georgia Transmission Corporation 2100 East Exchange Place Tucker, GA 30084	770-270-7669 zakia.elomari@gatrans.com	Zakia El Omari has over 11 years of industry experience and has been a transmission planning engineer for Georgia Transmission Corporation since August 2009. Prior to that she held a similar position for six years at the National Office of Electricity, Morocco. Among her responsibilities at GTC are System Impact Studies for Generation Interconnection and Transmission Service Requests. These studies include the assessment of the impact of new generators on the dynamic performance of the Integrated

			Transmission System. Other analyses performed include Power Flow, Closing Angle and Reactive Requirements. Zakia is also GTC's SME for FAC-001 and FAC-002. El Omari holds a B.S. in electrical engineering from the National School of Electricity and Mechanics in Morocco (L'École Nationale Supérieure d'Électricité et de Mécanique) and an MBA from the Ohio State University.
John Hagen	Pacific Gas and Electric Company 77 Beale Street, Mail Code B23H San Francisco, CA 94105	415-973-7356 jhh4@pge.com	John Hagen has over 30 years utility industry experience at Pacific Gas and Electric Company (PG&E), primarily in engineering, construction and project management of major utility projects in both transmission and generation totaling over $500 million. His transmission projects include high voltage line and substation construction, protection system upgrades, including RAS and PMU installations, and he led projects interconnecting over 4400 MW of third party merchant and QF generation. Generation experience includes geothermal, fossil, hydro, and nuclear modifications and construction. Project experience includes all

			aspects including planning, siting, permitting, design, procurement, construction, commissioning, and close out. The last seven years, Hagen has been the manager of transmission compliance for Electric Operations, with overall company responsibility for internal compliance program implementation and governance, standards development, monitoring and oversight, and corrective action program. This includes FERC Regulations, NERC Reliability Standards (O&P and CIP), and CPUC General Orders. He has served as company witness for project permit and rate case proceedings. He is also currently a member of the NERC Standards Segment 3 ballot body for PG&E. Hagen is a member of the North American Transmission Forum Compliance Practices Group, a member of the North American Generator Forum, a former member of the NERC Standards Committee's Communications and Planning Subcommittee,

			and the current vice chair (and past chair) of the Western Interconnection Compliance Forum. Hagen holds a B.S. degree in construction engineering from Cal Poly Pomona, an M.S. in project and systems management from Golden Gate University, a management certificate in risk management from UC Berkeley, and a certificate as a human performance practitioner from the University of Idaho. He is a registered Civil Engineer in California and a certified Project Management Professional with the Project Management Institute. He is also a member of the American Society of Civil Engineers and the Project Management Institute.
Joseph Hay	PJM 955 Jefferson Avenue Valley Forge Corporate Center Norristown, PA 19403	610-666-4265 joseph.hay@pjm.com	Joseph Hay is a senior engineer for PJM, with over 30 years' experience in the utility industry. He began his career in 1984 with Philadelphia Electric Company, and in 1997 he joined the Distribution Operations department of PECO Energy Company as an engineer. He was responsible for PECO Energy's

			suburban outdoor lighting programs, and facilitating streetlight maintenance for the city of Philadelphia. In 2000, he joined the Distribution Engineering department and was responsible for equipment maintenance programs, including Power Quality equipment, and the Center City Network located in downtown Philadelphia. In 2003, upon the merger of PECO Energy with Commonwealth Edison of Chicago, Hay joined the Distribution Underground Technical Standards department with responsibilities in both utilities. In 2006, he joined PECO Energy's Reliability department, where he was responsible for circuit analysis, and implementing improvements resulting from the circuit analysis to increase the reliability of the distribution system. In 2008 he joined the Transmission and Substation department as the underground transmission engineer. His responsibilities included construction and maintenance

			of new facilities ranging from 69 kV to 230 kV. He was also responsible for the NERC FAC-008 document at PECO Energy. In 2012, he joined the PJM Interconnection Projects department, where he is responsible for facilitating generator interconnections within PJM. Hay has a B.S. in mechanical engineering from Villanova University.
Ruth Kloecker	ITC Holdings 27175 Energy Way Novi, Michigan 48377	248-946-3370 rkloecker@itctransco.com	Ruth Kloecker is the manager of planning policies at ITC Holdings. She has been involved with the utility business for the past 19 years. She began her career in 1993 at Consumers Power Company (now Consumers Energy). In 2003, she joined the Michigan Electric Transmission Company, LLC (METC) as a transmission planner, where she was responsible for evaluating the performance of the 345 and 138kV transmission systems and recommending modifications for any identified deficiencies in these systems. In 2004, she was promoted to principal engineer. In 2006, with the acquisition of METC by ITC Holdings, she was

			promoted to manager of system and interconnection planning. In this position, Kloecker oversees the near term assessments and planning of the ITC Transmission and METC systems, along with evaluations of both load and generation interconnections. She was also responsible for reviewing the compliance obligations of the Planning Department and verifying that these were met. In 2009, she was moved to manager of planning policies within the planning department and become responsible for the Planning Department's compliance for all of the ITC Holdings operating companies. Kloecker has participated as an observer on the NERC Project 2006-02 – Assess Transmission and Future Needs standard development team for the last two years and on the NERC Project 2010-17 – Definition of Bulk Electric System (Phase 2) for the last year. She is the past chair of the Midwest Independent Transmission System Operator, Inc. (Midwest ISO) Expansion Planning Group

			and the current chair of the Planning Subcommittee. She was also an active participant in the Michigan Public Service Commission's Planning Consortium along with its three workgroups. She participates in the ongoing Midwest ISO East Region MTEP SPM and MTSTF meetings.
Zelalem Tekle	Baltimore Gas and Electric, An Exelon Company 7309 Windsor Mill Road Baltimore, MD 21244	410-470-7392 Zelalem.Tekle@constellation.com	Zelalem Tekle is a transmission planning engineer with Baltimore Gas and Electric Company. He began working as a transmission planning engineer in July 2010, where he performed steady-state, short-circuit, and dynamics studies in coordination with PJM to evaluate system performance for new generation interconnection with the BGE transmission system and for annual TPL assessment of the interconnected transmission system. Subsequently, he was promoted to lead and as such he coordinates with PJM on the annual Regional Transmission Expansion Planning studies for the BGE transmission system. Zelalem is responsible for BGE's Facility Connection documents including the compliance

			program for NERC Reliability Standards FAC-001 and FAC-002. On an annual basis, he reviews BGE's compliance plan for FAC-001 and FAC-002 technical accuracy and consistency. Zelalem holds a B.S. degree in electrical engineering from West Virginia University Institute of Technology, an M.S. in electrical engineering/power systems from Drexel University, and a graduate certificate in engineering management from Drexel University. He participates in the ongoing PJM Planning and Transmission Expansion Advisory Committee meetings.
Ganesh Velummylum	Northern Indiana Public Service Company 801 E 86th Ave Merrillville, IN	219-647-6331 gvelummylum@nisource.com	Ganesh Velummylum has 15 years of experience in systems planning, running load flow, short circuit and stability studies. During the development of FAC-001-2 and FAC-002-2, he was the manager of electric system planning for the Northern Indiana Public Service Company, where he oversaw transmission planning, distribution planning and system protection. Prior to this, he worked for Lakeland Electric in Florida as the

			manager of system planning. In this role, he was responsible for transmission and distribution planning, resource adequacy and load forecasting. In a previous role, he was also on the team that documented Lakeland Electric's FAC-001 and FAC-002 methodology. He also has several years of planning experience working for PJM Interconnection, where he performed interconnections studies and developed planning models. Velummylum earned his B.S. and M.S. in electrical engineering from Oklahoma State University.
Mallory Huggins Standards Developer	NERC 1325 G Street, NW Suite 600 Washington, DC 20005-3801	202-644-8062 mallory.huggins@nerc.net	During the development of FAC-001-2 and FAC-002-2, Mallory Huggins was a standards developer for NERC. She was the lead standards developer for Project 2010-02 – Connecting Facilities to the Grid and a supporting standards developer for Project 2008-12 and Project 2010-14.2 – Phase 2 of Balancing Authority Reliability-based Controls. Previously, she served as the lead standards developers on Project 2010-07 –Generator

			Requirements at the Transmission Interface, the Adequate Level of Reliability Task Force, and the VRF/VSL revision project. She also coordinated industry outreach and communication for NERC's standards department. Huggins has an M.A. in conflict resolution from Georgetown University and worked for FERC's Dispute Resolution Service during her two years of graduate school. She has training in facilitation, mediation and negotiation and earned a B.A. in rhetoric and communication studies from the University of Richmond. Huggins is now a Communications Coordinator at NERC.