

133 FERC ¶ 61,151  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 40

[Docket No. RM10-15-000]

Mandatory Reliability Standards for Interconnection Reliability Operating Limits

(November 18, 2010)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Notice of Proposed Rulemaking.

SUMMARY: Under section 215 of the Federal Power Act, the Federal Energy Regulatory Commission proposes to approve three new Interconnection Reliability Operations and Coordination Reliability Standards and seven revised Reliability Standards related to Emergency Preparedness and Operations, Interconnection Reliability Operations and Coordination, and Transmission Operations. These proposed Reliability Standards were submitted to the Commission for approval by the North American Electric Reliability Corporation, which the Commission has certified as the Electric Reliability Organization responsible for developing and enforcing mandatory Reliability Standards. The proposed Reliability Standards were designed to prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring prompt action to prevent or mitigate instances of exceeding Interconnection Reliability Operating Limits. The Commission also proposes to approve the addition of two new terms to the NERC Glossary of Terms. In addition, pursuant to

section 215(d)(5) of the Federal Power Act, the Commission proposes to direct NERC to develop a modification to the proposed term “Real-time Assessment” to address a specific concern identified by the Commission. The Commission raises some concerns with regard to certain aspects of NERC’s proposals and, based on the responses from NERC and industry, may choose to direct certain modifications to the proposed new and revised Reliability Standard, as well as the new Glossary Terms, as discussed below.

DATES: Comments are due [insert date that is 60 days after publication in the **FEDERAL REGISTER**].

ADDRESSES: You may submit comments, identified by docket number and in accordance with the requirements posted on the Commission’s web site, <http://www.ferc.gov>. Comments may be submitted by any of the following methods:

- **Agency Web Site**: Documents created electronically using word processing software should be filed in native applications or print-to-PDF format, and not in a scanned format, at <http://www.ferc.gov/docs-filing/efiling.asp>.
- **Mail/Hand Delivery**: Commenters unable to file comments electronically must mail or hand-deliver an original copy of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, NE, Washington, DC 20426. These requirements can be found on the Commission’s website, see, e.g., the “Quick Reference Guide for Paper Submissions,” available at

<http://www.ferc.gov/docs-filing/efiling.asp> or via phone from FERC Online

Support at (202) 502-6652 or toll-free at 1-866-208-3676.

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SUPPLEMENTARY INFORMATION:

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Mandatory Reliability Standards for Interconnection  
Reliability Operating Limits

Docket No. RM10-15-000

NOTICE OF PROPOSED RULEMAKING

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133 FERC ¶ 61,151  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

North American Electric Reliability Corporation

Docket No. RM10-15-000

NOTICE OF PROPOSED RULEMAKING

1. Under section 215 of the Federal Power Act (FPA),<sup>1</sup> the Federal Energy Regulatory Commission (Commission) proposes to approve three new Interconnection Reliability Operations and Coordination (IRO) Reliability Standards and seven revised Reliability Standards related to Emergency Preparedness and Operations (EOP), IRO, and Transmission Operations (TOP). The proposed Reliability Standards were submitted to the Commission for approval by the North American Electric Reliability Corporation (NERC), which the Commission has certified as the Electric Reliability Organization (ERO) responsible for developing and enforcing mandatory Reliability Standards.<sup>2</sup> The proposed Reliability Standards were designed to prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring prompt action to prevent or mitigate instances of exceeding interconnection reliability operating limits (IROL). The Commission also proposes to

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<sup>1</sup> 16 U.S.C. 824o.

<sup>2</sup> *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062, *order on reh'g & compliance*, 117 FERC ¶ 61,126 (2006), *aff'd sub nom. Alcoa, Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009).

approve the addition of two new terms to the NERC Glossary of Terms (NERC Glossary). In addition, pursuant to section 215(d)(5) of the Federal Power Act, the Commission proposes to direct NERC to develop a modification to the proposed term “Real-time Assessment” to address a specific concern identified by the Commission. The Commission raises some concerns with regard to certain aspects of these proposals and, based on the responses from NERC and from industry, may choose to direct certain modifications to the proposed new and revised Reliability Standard, as well as the new Glossary Terms, as discussed below.

2. The three new Reliability Standards proposed by NERC are designated as IRO-008-1 (Reliability Coordinator Operational Analyses and Real-time Assessments), IRO-009-1 (Reliability Coordinator Actions to Operate Within IROLs), and IRO-010-1a<sup>3</sup> (Reliability Coordinator Data Specification and Collection). In preparing these new Reliability Standards, the standards drafting team determined that it was necessary to retire or modify certain requirements from several existing standards. Accordingly,

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<sup>3</sup> NERC designates the version number of a Reliability Standard as the last digit of the Reliability Standard number. Therefore, original Reliability Standards end with “-0” and modified version one Reliability Standards end with “-1.” The NERC Board of Trustees approved the proposed IRO-010-1 Reliability Standard on October 17, 2008. Subsequently, on August 5, 2009, the NERC Board of Trustees approved an interpretation to the proposed IRO-010-1 standard. Accordingly, NERC is requesting approval of both the proposed standard and the appended interpretation, and NERC has designated the proposed standard and appended interpretation as IRO-010-1a.

NERC requests Commission approval of revised Reliability Standards EOP-001-2,<sup>4</sup> IRO-002-2, IRO-004-2, IRO-005-3, and TOP-006-2. NERC also proposes to add the following new terms to the NERC Glossary: “Operational Planning Analysis” and “Real-time Assessment.”<sup>5</sup>

## **I. Background**

### **A. Mandatory Reliability Standards**

3. Section 215 of the FPA requires a Commission-certified ERO to develop mandatory and enforceable Reliability Standards, which are subject to Commission review and approval. Once approved, the Reliability Standards are enforced by the ERO, subject to Commission oversight, or by the Commission independently.

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<sup>4</sup> Concurrent with its filing in this Docket, NERC filed a petition in Docket No. RM10-16-000 seeking approval of certain Emergency Preparedness and Operations Reliability Standards. NERC, Petition for Approval of Three Emergency Preparedness and Operations Reliability Standards, Docket No. RM10-16-000 (filed Dec. 31, 2009). As part of its filing in RM10-16-000, NERC proposed to retire Requirement R3.4 of EOP-001-0. Each petition proposes unique changes to EOP-001-0 reflecting the distinct issues addressed by the respective Reliability Standards drafting teams. NERC indicated in both petitions that it could not anticipate the sequence in which the Commission would act and therefore included two sets of proposed amendments to EOP-001-0 in each petition. The Commission will clarify upon issuance of Final Rules in each proceeding which revised version of EOP-001-0 it is addressing in its determination.

<sup>5</sup> The proposed new Reliability Standards and other modified Reliability Standards are not codified in the CFR and are not attached to the NOPR. They are, however, available on the Commission’s eLibrary document retrieval system in Docket No. RM10-15-000 and are available on the ERO’s website, [www.nerc.com](http://www.nerc.com).

**B. Order No. 693 Directives**

4. On March 16, 2007, the Commission issued Order No. 693, approving 83 of the 107 initial Reliability Standards filed by NERC, including the existing IRO Reliability Standards.<sup>6</sup> Under section 215(d)(5) of the FPA, the Commission directed NERC to develop modifications to the IRO Reliability Standards to address certain issues identified by the Commission.

5. With respect to IRO-001-1, the Commission directed the ERO to develop modifications to eliminate the regional reliability organization as an applicable entity.<sup>7</sup> The Commission also directed the ERO to modify IRO-002-1 to require a minimum set of capabilities that must be made available to the reliability coordinator to ensure that a reliability coordinator has the capabilities it needs to perform its functions.<sup>8</sup> With respect to IRO-003-2, the Commission directed the ERO to develop a modification to create criteria to define the term “critical facilities” in a reliability coordinator’s area and its adjacent systems.<sup>9</sup> The Commission also directed the ERO to modify IRO-004-1 to require the next-day analysis to identify control actions that can be implemented and

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<sup>6</sup> *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, 72 FR 16416 (Apr. 4, 2007), FERC Stats. & Regs. ¶ 31,242, *order on reh’g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

<sup>7</sup> Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 896.

<sup>8</sup> *Id.* P 908.

<sup>9</sup> *Id.* P 914.



effective within 30 minutes after a contingency. In addition, the Commission directed the ERO to consider adding Measures and Levels of Non-Compliance to Reliability Standards IRO-004-1 and IRO-005-1 that are commensurate with the magnitude, duration, frequency and causes of the violations and whether these occur during normal or contingency conditions.<sup>10</sup>

6. The Commission also directed the ERO to conduct a survey on IROL practices and actual operating experiences by requiring reliability coordinators to report any violations of IROLs, their causes, the date and time, the durations and magnitudes in which actual operations exceed IROLs to the ERO on a monthly basis for one year beginning two months after the effective date of Order No. 693.<sup>11</sup> On October 31, 2008, NERC filed the results of its year-long survey with the Commission.<sup>12</sup> On February 8, 2009, NERC supplemented those results in a second filing.<sup>13</sup>

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<sup>10</sup> *Id.* P 935. NERC has subsequently replaced Levels of Non-Compliance with Violation Severity Levels. See *Order on Violation Severity Levels Proposed by the Electric Reliability Organization*, 123 FERC ¶ 61,284 (*Violation Severity Level Order*), *order on reh'g*, 125 FERC ¶ 61,212 (2008).

<sup>11</sup> *Id.* P 951.

<sup>12</sup> NERC, Compliance Filing, Docket No. RM06-16-006 (filed Oct. 31, 2008).

<sup>13</sup> NERC, Compliance Filing, Docket No. RM06-16-006 (filed Feb. 8, 2009).

## II. Discussion

7. In a December 31, 2009 filing (NERC Petition),<sup>14</sup> NERC requests Commission approval of proposed Reliability Standards IRO-008-1, IRO-009-1, and IRO-010-1a. NERC contends that these new Reliability Standards would address certain Commission directives from Order No. 693. In developing the new IRO Reliability Standards, NERC determined that it was necessary to retire or modify certain requirements from several existing standards. Accordingly, NERC proposes revised Reliability Standards EOP-001-1, IRO-002-2, IRO-004-2, IRO-005-3, TOP-003-1, TOP-005-2, and TOP-006-2. NERC also requests approval of new definitions “Operational Planning Analysis” and “Real-time Assessment.”

8. As discussed below, the Commission proposes to approve new Reliability Standards IRO-008-1, IRO-009-1, and IRO-010-1a. The Commission also proposes to approve revised Reliability Standards EOP-001-1, IRO-002-2, IRO-004-2, IRO-005-3, TOP-003-1, TOP-005-2, and TOP-006-2 as well as the two new NERC Glossary terms.

9. In addition, the Commission seeks comment on specific concerns related to the proposed IRO Reliability Standards, as set forth below.

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<sup>14</sup> *North American Electric Reliability Corp.*, Dec. 31, 2009 Petition for Approval of Proposed New and Revised Reliability Standards for Operating Within Interconnection Operating Limits (NERC Petition).

**A. System Operating Limits**

10. To maintain the reliable operation of the Bulk-Power System, reliability coordinators, balancing authorities, and transmission operators must be aware of the applicable system operating limits (SOLs) and interconnection reliability operating limits (IROLs) on their system. NERC defines SOLs as the value (such as MW, MVar, Amperes, Frequency or Volts) that satisfies the most limiting of the prescribed operating criteria for a specific system configuration to ensure operation within acceptable reliability criteria. These SOLs are based upon certain operating criteria. IROLs are, essentially, a subset of SOLs. NERC defines IROLs as the value (such as MW, MVar, Amperes, Frequency or Volts) derived from, or a subset of the SOLs, which if exceeded, could expose a widespread area of the bulk electric system to instability, uncontrolled separation, or cascading outages.<sup>15</sup>

**NERC Proposal**

11. The proposed IRO Reliability Standards together with the proposed revisions to existing Reliability Standards would divide responsibility for SOLs and IROLs between reliability coordinators and transmission operators according to the Functional Model.<sup>16</sup> NERC explains that having two entities with the same primary responsibility is not

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<sup>15</sup> See NERC Glossary, available at [http://www.nerc.com/docs/standards/rs/Glossary\\_of\\_Terms\\_2010April20.pdf](http://www.nerc.com/docs/standards/rs/Glossary_of_Terms_2010April20.pdf).

<sup>16</sup> NERC, *Reliability Functional Model*, version 5, at 30 (Nov. 2009), available at [http://www.nerc.com/files/Functional\\_Model\\_V5\\_Final\\_2009Dec1.pdf](http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf).

supported by the Functional Model. However, NERC notes that the proposed Reliability Standards should not imply that the reliability coordinator will not look at its future operations with respect to specific SOLs.<sup>17</sup> NERC states that the reliability coordinator must look at its future operations with respect to specific SOLs to ensure that their transmission operators are taking actions at appropriate times, but the primary responsibility for SOLs rests with the transmission operators. NERC explains that, under the proposed Reliability Standards, the reliability coordinator retains overall visibility of all operations within its Wide-Area view, including some SOLs, although the transmission operator is primarily responsible for actions related to SOLs.<sup>18</sup> NERC states that the IRO standards were developed in support of the authority and assignment of tasks in the Functional Model.<sup>19</sup> NERC explains that under the Functional Model, while reliability coordinators will assign their transmission operators tasks associated with IROs, the reliability coordinator has ultimate responsibility for these tasks, and the reliability coordinator is sanctioned if these tasks are not performed as required by the Reliability Standards.<sup>20</sup>

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<sup>17</sup> NERC Petition at 77.

<sup>18</sup> *Id.* at 78.

<sup>19</sup> *Id.* at 7-9.

<sup>20</sup> *Id.* at 8.

12. NERC explains that, under the Functional Model, the reliability coordinator is the functional entity with the highest level of responsibility and authority for real-time reliability of the Bulk-Power System. NERC states that the reliability coordinator is responsible for identifying the subset of SOLs that are known as IROLs, and may direct its transmission operators to take actions associated with IROLs. In assigning a single task to a single functional entity, under the Functional Model, the reliability coordinator is the sole functional entity responsible for developing IROLs and for actions to prevent/mitigate instances of exceeding IROLs. While the transmission operator has no “direct” responsibility for developing IROLs, the transmission operator may be assigned the task of developing some IROLs, monitoring real-time values against identified IROLs, and taking actions to prevent reaching an IROL or to mitigate an instance of exceeding an IROL. However, the transmission operator only performs these tasks when directed to do so by its reliability coordinator.<sup>21</sup>

13. NERC further explains that, in a similar fashion, the Functional Model assigns responsibility for SOLs that are not IROLs to the transmission operator. But, NERC states, this too is a shared responsibility.<sup>22</sup> NERC states that where the Transmission Operator has primary responsibility for developing the SOLs within its transmission operator area, the transmission operator may request the assistance of its reliability

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<sup>21</sup> *Id.*

<sup>22</sup> *Id.* at 9.

coordinator in developing these SOLs. In addition, NERC states that it is the reliability coordinator that is held responsible for ensuring that transmission operators develop SOLs for its reliability coordinator area in accordance with a methodology developed by the reliability coordinator. NERC states that the transmission operator must share its SOLs with its reliability coordinator, and the reliability coordinator must share any SOLs it develops with its transmission operator. NERC also states that the reliability coordinator monitors the status of some, but not all, SOLs.

14. According to NERC, the reliability coordinator's visualization capabilities are not expected to display all SOLs within the Wide-Area that the reliability coordinator monitors because this would mix SOLs that have little impact on reliability with those SOLs that are associated with facilities that are important to the Bulk-Power System. NERC states that the reliability coordinator's visualization capabilities are expected to display the real-time status of parameters against all IROLs that the reliability coordinator monitors and also display the subset of SOLs associated with facilities that are most critical to the portions of the Bulk-Power System that are monitored by the reliability coordinator.

15. Under proposed new Reliability Standards, IRO-008-1, IRO-009-1, and IRO-010-1a, reliability coordinators must monitor and analyze IROLs within their Wide-Area to prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection. These Reliability Standards would not require the reliability coordinator to monitor and analyze SOLs other than IROLs within their reliability coordinator area. Similarly, NERC's proposed revisions to Reliability

Standards EOP-001-1, IRO-002-2, IRO-004-2, IRO-005-3, TOP-003-1, TOP-005-2, and TOP-006-2, *inter alia*, would remove requirements for the reliability coordinator to monitor and analyze SOLs other than IROLs.

### **Discussion**

16. We believe that it is appropriate to develop requirements for Reliability Standards that offer a clear division of responsibilities among reliability coordinators and transmission operators. We, therefore, propose to approve NERC's proposed division of responsibility for SOLs and IROLs among reliability coordinators and transmission operators. Although we support NERC's proposal and propose here to approve it with only a limited directive regarding one proposed definition, we are also seeking comments from NERC and industry to obtain further information and ensure that there will not be gaps in the analysis of SOLs by reliability coordinators going forward, particularly those SOLs that could become IROLs. NERC acknowledges in its filing that the transmission operator must develop and share its SOLs with its reliability coordinator, and the reliability coordinator must develop and share any SOLs it develops with its transmission operator.<sup>23</sup> NERC also states that the reliability coordinator monitors the status of some, but not all, SOLs.<sup>24</sup> In addition, the Commission is aware that NERC is currently working on a project to identify a subset of SOLs, other than IROLs, that a reliability

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<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

coordinator must continuously monitor and analyze.<sup>25</sup> Taken together, NERC's statements and its ongoing project indicate a need for reliability coordinators to continue to analyze certain SOLs. We, therefore, seek comment on whether there is a need for reliability coordinators to continue to analyze, in addition to continuing to monitor and coordinate data on,<sup>26</sup> SOLs other than IROLs.

17. Since the ERO has stated that responsibility for the SOLs is shared between the reliability coordinator and their transmission operators, we also believe it may be beneficial for the reliability coordinator to have a documented methodology for identifying the SOL information it needs to fulfill its responsibilities for monitoring, day ahead and real-time assessments, and operational control within the reliability coordinator's area. We seek comment on this matter.

18. In addition, we request comment from NERC, reliability coordinators, and other interested entities on the current practices of reliability coordinators and transmission operators with respect to coordinating operational responsibilities for monitoring, day ahead and real-time assessments; and operating SOLs and IROLs, the practical division of responsibilities for preventing and mitigating SOL and IROL violations, and the monitoring capabilities of the reliability coordinator with respect to IROLs as well as

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<sup>25</sup> NERC identifies this as "Project 2007-03: Real-time Operations," available at [http://www.nerc.com/filez/standards/Real-time\\_Operations\\_Project\\_2007-03.html](http://www.nerc.com/filez/standards/Real-time_Operations_Project_2007-03.html).

<sup>26</sup> Existing reliability standards that NERC does not propose to change here continue to require reliability coordinators to monitor SOLs. See Reliability Standard IRO-002-1 Requirement R6.



SOLs. The Commission further seeks comment as to whether a reliability coordinator can provide an accurate assessment of the Bulk-Power System to its transmission operators on a Wide-Area basis, without evaluating: (1) the operating environment on SOLs that will impact the transmission operators within the reliability coordinator's areas; (2) SOLs that have the potential to become IROLs; and, (3) the existing IROLs within the reliability coordinator area. In addition, the Commission seeks comments as to whether a transmission operator can provide reliable operating assessments or make reliable operating instructions on an SOL that is on the border between two different transmission operator's areas. The Commission also requests comment on whether the reliability coordinator should have responsibility to monitor certain SOLs other than IROLs, and whether such a responsibility would place an unreasonable burden on reliability coordinators. If a reliability coordinator should monitor certain SOLs other than IROLs, comments should address in detail how reliability coordinators should determine which SOLs to monitor.

19. The Commission has noted that NERC Standard IRO-006, Transmission Loading Relief (TLR), requires the reliability coordinators in the Eastern Interconnection to relieve overloads on the facilities modeled in the Interchange Distribution Calculator (IDC). IRO-006 requires the reliability coordinator to model the SOLs and IROLs in the IDC to perform the TLR procedures. The Commission seeks comments on how the reliability coordinators in the Eastern Interconnections selects the SOLs for evaluation by the IDC and the extent of any burden this has caused the reliability coordinator.

20. The NERC Functional Model is a reference document developed by NERC that outlines functions for each responsible entity in the NERC Reliability Standards.<sup>27</sup> NERC explains in its filing that the NERC Functional Model was developed by first identifying all of the operating tasks necessary for reliability, and then assigning each of these operating tasks to a single functional entity.<sup>28</sup> NERC states that this approach results in a clear identification of a single functional entity with responsibility for each reliability task. However, NERC also states that in later versions of the Functional Model, there are circumstances where the Functional Model assigns some activities to more than one planning entity.<sup>29</sup> NERC explains that, under the Functional Model, the reliability coordinator is responsible for identifying the subset of SOLs known as IROLs and that the transmission operator is responsible for other SOLs. But the Functional Model assigns a much broader role to the reliability coordinator to maintain the real-time operating reliability of the bulk electric system within its area. The Commission seeks comments from NERC and the public as to how the current Functional Model represents the delineation of assessment and operating responsibilities between the reliability coordinator and transmission operator with respect to SOLs and IROLs.

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<sup>27</sup> NERC, *Reliability Functional Model*, version 5 at 30 (Nov. 2009), available at [http://www.nerc.com/files/Functional\\_Model\\_V5\\_Final\\_2009Dec1.pdf](http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf). NERC developed the current version of the Functional Model after it developed the proposed Reliability Standards.

<sup>28</sup> NERC Petition at 7.

<sup>29</sup> *Id.* at 7 n.9.

21. Based on the foregoing, the Commission proposes to approve the proposed new and revised Reliability Standards without modification (with the exception of the limited directive proposed below), as they appear to be an improvement over the existing Reliability Standards with respect to the division of responsibilities between reliability coordinators and transmission operators. Our intent in seeking comments from NERC and industry in this NOPR is to better understand the proposed division of responsibilities, as well as the future modifications to those responsibilities that NERC intends to pursue.

**B. Proposed New Reliability Standards**

**1. IRO-008-1**

22. Proposed Reliability Standard IRO-008-1 has the stated purpose of preventing instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring that the Bulk Electric System is assessed during the operations horizon. The proposed Reliability Standard applies to reliability coordinators. IRO-008-1 requires the reliability coordinator to use analyses and assessments as methods of achieving the stated goal. The Reliability Standard requires analysis of the reliability coordinator's Wide-Area<sup>30</sup> ahead of time and during real-time.

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<sup>30</sup> The term "Wide-Area" is defined in the NERC Glossary, approved by the Commission. As defined, Wide-Area includes not only the reliability coordinator's Area, but also critical flow and status information from adjacent reliability Coordinator areas as determined by detailed system studies to allow the calculation of IROLs. See NERC Glossary available at [http://www.nerc.com/docs/standards/rs/Glossary\\_of\\_Terms\\_2010April20.pdf](http://www.nerc.com/docs/standards/rs/Glossary_of_Terms_2010April20.pdf).

It also requires communication with the entities that need to take specific operational actions based on the analyses and assessments.

23. Reliability Standard IRO-008-1 contains three requirements. Requirement R1 requires each reliability coordinator to perform an Operational Planning Analysis to assess whether the planned operations for the next day within its Wide Area, will exceed any of its IROLs during anticipated normal and contingency event conditions.

Requirement R2 requires the reliability coordinator to perform a Real-Time Assessment at least once every 30 minutes to determine if its Wide Area is exceeding any IROLs or is expected to exceed any IROLs. Requirement R3 requires a reliability coordinator to share the results of an Operational Planning Analysis or Real-Time Assessment that indicates the need for specific operational actions to prevent or mitigate an instance of exceeding an IROL with those entities that are expected to take those actions.

24. NERC explains that IRO-008-1, Requirement R1 does not specify any single application program that all reliability coordinators must use because the Requirement assumes that the reliability coordinator has a suite of applications that it can use to conduct its assessment, verified as part of the certification process. NERC notes that having the ability to conduct a day-ahead contingency analysis is a requirement for reliability coordinator certification.

25. NERC also requests approval of two new terms that appear in IRO-008-1: “Operational Planning Analysis” and “Real-time Assessment.” Operational Planning Analysis is defined as:

An analysis of the expected system conditions for the next day's operation. (That analysis may be performed either a day ahead or as much as 12 months ahead.) Expected system conditions include things such as load forecast(s), generation output levels, and known system constraints (transmission facility outages, generator outages, equipment limitations, etc.).

NERC states that the definition was designed to provide greater specificity regarding the day-ahead study. NERC explains that the term "unique" used in the currently-effective IRO-004-1 causes confusion. NERC states that in the event there are no changes to the expected conditions from one day to the next, the reliability coordinator would not be forced to conduct a new analysis of the expected system conditions solely to have documentation for compliance.

26. The proposed term "Real-time Assessment" is defined as "[a]n examination of existing and expected system conditions, conducted by collecting and reviewing immediately available data." The purpose of the new term is to assure that the reliability coordinator is required to conduct a real-time assessment, including situations when the reliability coordinator is operating without its primary control facilities, by collecting and reviewing available data. NERC explains that the definition of Real-Time Assessment is purposefully ambiguous to allow the assessment to be conducted either through the energy management system or manually.

### **NOPR Proposal**

27. We agree with NERC that the proposed Reliability Standard IRO-008-1 would prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring that the bulk electric system is assessed

during the operations horizon. In addition, the Commission recognizes NERC's effort to create a body of IRO Reliability Standards that clearly define which functional entity has the ultimate responsibility for SOLs and IROLs. Accordingly, pursuant to section 215(d)(2) of the FPA, the Commission proposes to approve Reliability Standards IRO-008-1, as just, reasonable, not unduly discriminatory or preferential, and in the public interest. To ensure that the proposed changes are supported by the Functional Model, the Commission requests comment whether the proposed Reliability Standards, such as IRO-008-1, appropriately resolve the division of responsibilities for SOLs and IROLs or whether some level of sharing of responsibility needs to exist.

28. The Commission also proposes to approve the addition of two new definitions to the NERC Glossary: "Operational Planning Analysis" and "Real-time Assessment" with limited modification, as discussed below. Although the proposed definition of Operational Planning Analysis would permit entities to use an analysis of the expected system conditions for the next day's operation that was performed up to twelve months earlier, the discretion to use an existing analysis is limited to circumstances where the expected system conditions, such as load forecasts, generation output levels, and known system constraints are the same for both days. Nevertheless, the Commission requests comments from NERC and the public on the prudence of using an Operational Planning Analysis up to twelve months old. We request comment on whether this timeframe is reasonable or whether the timeframe should be shorter to ensure that the analysis is not outdated. In addition, the Commission also seeks comments from NERC and the public

on whether the definition should include measurable criteria needed to determine whether it is appropriate to use an existing analysis.

29. In addition, the Commission seeks comment on the meaning of “immediately available data” within the proposed definition of Real-Time Assessment. Requirement R6 of proposed Reliability Standard IRO-002-2 would require reliability coordinators to have adequate analysis capabilities such as state estimation, pre- and post-contingency analysis capabilities (thermal, stability, and voltage), and wide-area overview displays.<sup>31</sup> Thus, it appears that any immediately available data used by the reliability coordinator in the development of a Real-time Assessment should be data obtained from one of these analysis capabilities. We believe this could be clearer. Accordingly, under section 215(d)(5) of the FPA, the Commission proposes to direct NERC to modify the definition of “Real-time Assessment” to specify that the type of data to be relied upon by a reliability coordinator in conducting a Real-time Assessment must be based on adequate analysis capabilities such as those referenced in Requirement R6 of IRO-002-2 when the tools are available.

## **2. IRO-009-1**

30. As proposed, Reliability Standard, IRO-009-1 is designed to prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the

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<sup>31</sup> As discussed below, NERC proposes to revise IRO-002-1 by removing one provision, Requirement R2. Thus, Requirement R6 of proposed IRO-002-2 is the same as Requirement R7 of the existing version 1 Reliability Standard.

interconnection by “ensuring prompt action to prevent or mitigate instances of exceeding [IROLs].” Proposed Reliability Standard IRO-009-1 applies only to reliability coordinators.

31. For each IROL that the reliability coordinator identifies one or more days in advance, the reliability coordinator must, under Requirements R1 and R2, have one or more operating processes, procedures, or plans that identify actions it shall take that can be implemented in time to prevent exceeding those IROLs and to mitigate the magnitude and duration of exceeding that IROL such that the IROL is alleviated within the maximum time duration allowed for a violation of an IROL. Reliability Standard IRO-009-1 refers to the maximum response period for alleviating an IROL as its “IROL Tv.”<sup>32</sup> Under Requirements R3 and R4, the reliability coordinator must use those operating processes, procedures, or plans to prevent and mitigate IROLs. If reliability coordinators cannot agree on the value for an IROL or its IROL Tv, Requirement R5 would require each reliability coordinator that monitors that facility to use the most conservative value.

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<sup>32</sup>The NERC Glossary of Terms defines “IROL Tv” as:

The maximum time that an Interconnection Reliability Operating Limit can be violated before the risk to the interconnection or other Reliability Coordinator Areas becomes greater than acceptable. Each Interconnection Reliability Operating Limit’s Tv shall be less than or equal to 30 minutes.



### **NOPR Proposal**

32. The Commission agrees that having action plans developed and implemented with respect to IROLs to prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection increases the likelihood that reliability coordinators will take appropriate action. Accordingly, under section 215(d)(2) of the FPA, the Commission proposes to approve Reliability Standard IRO-009-1, as just, reasonable, not unduly discriminatory or preferential, and in the public interest. However, as discussed above, the Commission requests comment on the extent that reliability coordinators should have action plans developed and implemented with respect to other SOLs apart from IROLs and if so, which SOLs.

#### **3. IRO-010-1a**

33. NERC proposes the addition of a new Reliability Standard, IRO-010-1a to the current suite of IRO Reliability Standards. IRO-010-1a is designed to prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by mandating that the reliability coordinator have the data it needs to monitor and assess the operation of its reliability coordinator Area.

34. The requirements in the Reliability Standard specify a formal request process for the reliability coordinator to explicitly identify the data and information it needs for reliability; and require the entities with the data to provide it as requested. The Reliability Standard applies to the reliability coordinator and to the other functional

entities that must supply data to the reliability coordinator.<sup>33</sup> This includes entities that have been identified as owners, users, or operators of the bulk-power system.

35. Because the interpretation for IRO-010-1 was completed before the filing of IRO-010-1, NERC requests Commission approval of IRO-010-1a, which includes the standard as interpreted. The WECC Reliability Coordination Subcommittee requested clarification on: (1) the type of data to be supplied to the reliability coordinator; (2) which entities are ultimately responsible for ensuring data are provided; and (3) what actions are expected of the reliability coordinator regarding a “mutually acceptable format.”

36. In response to the questions posed by the WECC Reliability Coordination Subcommittee, NERC’s interpretation team clarified that the data to be supplied in Requirement R3 applies to the documented specification for data and information referenced in Requirement R1. They also explained that the intent of Requirement R3 is for each responsible entity to ensure that its data and information (as stated in the documented specification in Requirement R1) are provided to the reliability coordinator. NERC’s interpretation team stated that another entity may provide that data or information to the reliability coordinator on behalf of the responsible entity, but the responsibility remains with the responsible entity. Finally, they explained that

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<sup>33</sup> The requirements in the standard are specifically applicable to the following functional entities: (1) reliability coordinator; (2) balancing authority; (3) generator owner; (4) generator operator; (5) interchange authority; (6) load-serving entity; (7) transmission operator; and (8) transmission owner.

Requirement R1.2 mandates that the parties will reach a mutual agreement with respect to the format of the data and information. If the parties can not mutually agree on the format, it is expected that they will negotiate to reach agreement or enter into dispute resolution to resolve the disagreement.<sup>34</sup>

### **NOPR Proposal**

37. Under section 215(d)(2) of the FPA, the Commission proposes to approve Reliability Standard IRO-010-1a, including the proposed interpretation, as just, reasonable, not unduly discriminatory or preferential, and in the public interest. However, the Commission notes that the requirements of Reliability Standard IRO-010-1a do not require reliability coordinators to specify a list of minimum data needed for reliable operation of the Bulk-Power System. The Commission is concerned that, without such a minimum list, neighboring reliability coordinators could experience problems regarding compatibility and, therefore, common understanding of data. For example, if differing data requirements were specified by adjacent reliability coordinators, the analysis performed by one could indicate a more severe result from a possible contingency and result in conflicting operating procedures for mitigation of risk to the Bulk-Power System. Therefore, the Commission requests comments from the ERO and industry on whether a minimum list of data is necessary for the effective sharing of data between neighboring reliability coordinators and, if so, what data should

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<sup>34</sup> NERC Petition at 108.

be included. The Commission also requests comments from NERC and the industry on how compatibility of data between neighboring reliability coordinators can be assured absent a list of minimum data as part of this proposed Reliability Standard.

**C. Proposed Revised Reliability Standards**

**1. EOP-001-1**

38. NERC proposes to retire Requirement R2 of Reliability Standard EOP-001-0. To implement this revision, NERC proposes a revised Reliability Standard EOP-001-1. The purpose of EOP-001-1 is to require each transmission operator and balancing authority to develop, maintain, and implement a set of plans to mitigate operating emergencies.

These plans need to be coordinated with other transmission operators and balancing authorities, and the reliability coordinator. Revised Reliability Standard EOP-001-1 would apply only to balancing authorities and transmission operators.

39. NERC contends that, upon IRO-009-1 becoming effective, Requirement R2 of EOP-001-0 should be retired. Under Requirement R2 transmission operators must have an emergency load reduction plan for all identified IROLs. NERC contends that this requirement would no longer be appropriate upon IRO-009-1 becoming effective because the reliability coordinator, not the transmission operator, is responsible for developing plans for mitigating IROLs. Accordingly, NERC requests approval of EOP-001-1, which is identical to existing Reliability Standard EOP-001-0 except for the retirement of Requirement R2.

40. NERC contends that the proposed new Requirements R1 and R2 of IRO-009-1 combined with the revisions in proposed Reliability Standard EOP-001-1 address the

Commission's directives in Order No. 693 to modify EOP-001-0 to include the reliability coordinator as an applicable entity and to require the reliability coordinator to act to mitigate IROL violations within 30 minutes.<sup>35</sup> In developing IRO-009-1, NERC states that the drafting team determined that there are some IROLs that must be resolved in a time frame that is shorter than 30 minutes. Accordingly, Requirement R2 of IRO-009-1 requires that each action plan developed to resolve an IROL must be capable of being executed such that the IROL is relieved within its IROL Tv. In addition, Requirement R4 of IRO-009-1 requires the reliability coordinator to act, without delay, when actual system conditions show that there is an instance of exceeding an IROL.

### **NOPR Proposal**

41. Under section 215(d)(2) of the FPA, the Commission proposes to approve Reliability Standard EOP-001-1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. The Commission also proposes to find that the ERO has satisfied the first and second directives from P 566 of Order No. 693.<sup>36</sup>

#### **2. IRO-002-2**

42. NERC proposes to retire Requirement R2 of Reliability Standard IRO-002-1. To implement this revision, NERC requests Commission approval of revised Reliability

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<sup>35</sup> Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 548, 556, 566.

<sup>36</sup> The Commission notes that the third and fourth directives listed in P 566 of Order No. 693 remain outstanding. Further, the Commission directed the ERO to consider a pilot program for implementing system states. Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 566.

standard IRO-002-2. The purpose of IRO-002-2 is to provide reliability coordinators with the information, tools and other capabilities that they need to perform their responsibilities. IRO-002-2 would apply only to reliability coordinators.

43. Requirement R2 of IRO-002-1 requires each reliability coordinator to determine the data requirements to support its reliability coordinator tasks and to request such data from its transmission operators, balancing authorities, transmission owners, generation owners, generation operators, and load-serving entities, or adjacent reliability coordinators. NERC explains that proposed Reliability Standard IRO-010-1a (discussed above) requires the reliability coordinator to develop and distribute a data specification to ensure that entities provide data as needed to support monitoring, analyses, and assessments. NERC contends that the proposed requirements are more explicit than the associated requirement in Reliability Standard IRO-002-1.

44. Reliability Standard IRO-002-2 continues to require each reliability coordinator to monitor SOLs other than IROLs both within its reliability coordinator area and in surrounding reliability coordinator areas. Under Requirement R4 of IRO-002-2, each reliability coordinator must have detailed real-time monitoring capability of its reliability coordinator area and sufficient monitoring capability of its surrounding reliability coordinator areas to ensure that potential or actual SOLs or IROL violations are identified. In addition, under Requirement R5, each reliability coordinator must monitor bulk electric system elements such as generators, transmission lines, buses, transformers and breakers that could result in SOL or IROL violations within its reliability coordinator area.

45. In Order No. 693, the Commission directed the ERO to develop a modification to IRO-002-1 that requires a minimum set of capabilities that should be made available to reliability coordinators. NERC acknowledges that the proposed modification does not address this directive. NERC states that this directive is being considered in Project 2009-02 – Real-time Tools and Analysis Capabilities.

### **NOPR Proposal**

46. Under section 215(d)(2) of the FPA, the Commission proposes to approve Reliability Standard IRO-002-2. The Commission proposes to find that the data specification requirements of proposed Reliability Standard IRO-001-1a are more explicit than the direction provided in Requirement R2 of IRO-002-1. In addition, the Commission accepts NERC's commitment to develop a minimum set of capabilities that should be made available to reliability coordinators.

### **3. IRO-004-2**

47. NERC proposes to revise IRO-004-1 by retiring Requirements R1 through R6. To implement these revisions, NERC requests Commission approval of Reliability Standard IRO-004-2. The purpose of IRO-004-2 is to require each reliability coordinator to conduct next-day reliability analyses for its reliability coordinator area to ensure the bulk electric system can be operated reliably in anticipated normal and contingency conditions. IRO-004-2 would apply to balancing authorities, transmission operators, and transmission service providers.

48. NERC states that, upon approval of proposed IRO-008-1, Requirement R1 of the currently-effective IRO-004-1 should be retired because the requirement only requires a

next-day reliability analysis of its own reliability coordinator area as opposed to its Wide-Area, which also would include critical flow and status information from adjacent reliability coordinator areas to allow the calculation of IROLs. NERC explains that because proposed IRO-008-1 requires the reliability coordinator to assess a wider area than is currently required by IRO-004-1, the reliability coordinator is required to continuously look beyond its own area boundaries and assess a broader portion of the interconnected Bulk-Power System. NERC further states that the purpose of conducting a day-ahead analysis is not to “ensure” but to “assess” the system and, thus, Requirement R1 of currently-effective IRO-004-1 is inaccurate.

49. NERC also seeks to retire Requirement R2 of IRO-004-1, which requires each reliability coordinator to “pay particular attention to parallel flows to ensure one reliability coordinator area does not place an unacceptable or undue burden on an adjacent reliability coordinator area.”<sup>37</sup> NERC states that the phrase “to pay particular attention to” is neither clear nor measurable. NERC asserts that the requirements in currently-effective IRO-014, IRO-015, and IRO-016 are aimed at ensuring that reliability coordinators coordinate their actions with one another and act in the best interest of the interconnection as a whole. In addition, NERC explains that, under the Functional Model, the transmission operator is responsible for the real-time operation of the transmission system with the reliability coordinator providing oversight of the

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<sup>37</sup> Reliability Standard IRO-004-1, Requirement R2.



transmission operator's actions, directing additional or alternate actions when needed.

NERC states that the requirements proposed in the new IRO Reliability Standards focus specifically on IROLs and are inclusive of any reliability implications due to parallel flows.

50. In support of retiring Requirements R1 and R2 of IRO-004-1, NERC posits that under the Functional Model, the reliability coordinator is the functional entity with primary responsibility for IROLs and the transmission operator is the functional entity with primary responsibility for SOLs. NERC states that, under certain circumstances, the transmission operator may request the assistance of its reliability coordinator in developing an SOL but the responsibility for addressing the SOL remains with the transmission operator.<sup>38</sup> NERC explains that, under the Functional Model and Requirement R11 of Reliability Standard TOP-002-2, the transmission operator is responsible for conducting analyses to identify where there may be instances of exceeding SOLs. NERC also states that, under TOP-008-1, the transmission operator is responsible for taking actions to either prevent or mitigate instances of exceeding SOLs. NERC states that, by contrast, it is the reliability coordinator that is responsible for ensuring that IROLs are developed for its reliability coordinator area in accordance with a methodology developed by the reliability coordinator. Further, NERC states that the transmission operator must share its SOLs with its reliability coordinator, and the

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<sup>38</sup> See Reliability Standard TOP-008-1, requiring transmission operators to take action to prevent or mitigate violations of SOLs.

reliability coordinator must share any SOLs it develops with its transmission operator. NERC states that the reliability coordinator monitors the status of some, but not all, SOLs.

51. NERC also contends that, upon proposed Reliability Standard IRO-009-1 becoming effective, Requirements R3 and R6 of currently-effective IRO-004-0 should be retired. Under Requirement R3 of IRO-004-0, reliability coordinators must, in conjunction with its transmission operators and balancing authorities, develop action plans, including for reducing load to return transmission loading to within acceptable SOLs or IROLs. NERC states that the use of the phrase, “in conjunction with” is not supported by the responsibilities of the reliability coordinator in the Functional Model and would be inconsistent with the requirements of proposed Reliability Standard IRO-009-1. NERC also states that proposed Requirement R3 of IRO-009-1 includes language that is more explicit than the language in Requirement R6 of existing Reliability Standard IRO-004-1.

52. Finally, NERC proposes to retire Requirements R4 and R5 from IRO-004-1. Requirement R4 requires each transmission operator, balancing authority, transmission owner, generator owner, generator operator, and load-serving entity in the reliability coordinator area to provide information required for system studies. NERC proposes to retire Requirement R4 because it identifies only a fraction of the reliability-related data needed by the reliability coordinator. Requirement R5 requires each reliability coordinator to share the results of its system studies with other reliability coordinators and transmission operators, balancing authorities, and transmission service providers

within its reliability coordinator area. NERC states that proposed Reliability IRO-010-1a offers a suitable replacement for currently-effective Requirements R4 and R5 because IRO-010-1a requires reliability coordinators to know, in advance, what data and information it needs and what data and information it needs to share with other reliability entities. In addition, requirement R3 of proposed Reliability Standard IRO-008-1 would require the reliability coordinator to share the results of its analyses with entities within its reliability coordinator area.

### **NOPR Proposal**

53. Under section 215(d)(2) of the FPA, the Commission proposes to approve Reliability Standard IRO- IRO-004-2, as just, reasonable, not unduly discriminatory or preferential, and in the public interest. The Commission recognizes NERC's efforts to more clearly define which functional entity has the ultimate responsibility for SOLs and IROLs, and to synchronize existing standards with the proposed new IRO Reliability Standards. We propose to find that the requirements proposed for retirement from IRO-004-1 are appropriately addressed in new Reliability Standards IRO-008-1, IRO-009-1, and IRO-010-1a.

#### **4. IRO-005-3**

54. NERC proposes to retire Requirement R2, R3, R5, R16, and R17 of currently-effective Reliability Standard IRO-005-2, and to modify Requirements R9, R13, and R14. To implement these revisions, NERC requests Commission approval of proposed Reliability Standard IRO-005-3. The purpose of proposed Reliability Standard IRO-005-3 is to require the reliability coordinator to be continuously aware of conditions

within its reliability coordinator area and include this information in its reliability assessments. In addition, the reliability coordinator must monitor the bulk electric system parameters that may have significant impacts upon the reliability coordinator area and neighboring reliability coordinator areas. IRO-005-3 would apply to reliability coordinators, balancing authorities, transmission operators, transmission service providers, generator operators, load-serving entities, and purchasing-selling entities.

55. NERC contends that, upon the new IRO Reliability Standards becoming effective, Requirements R2, R3, R5, R16, and R17 of IRO-005-2 should be retired and Requirements R9, R13, and R14 should be modified. Except for Requirement R2, all of the requirements proposed for retirement set responsibilities for the reliability coordinator to be continuously aware of SOLs and IROLs within its reliability coordinator area and to identify the cause for each SOL and IROL. Similarly, all of the requirements proposed for modification include requirements for the reliability coordinator to address SOLs and for the transmission operator to address IROLs. NERC contends that these existing requirements should be retired or modified in light of the division of responsibilities between reliability coordinators and transmission operators expressed in new Reliability Standard IRO-009-1.

56. Requirement R2 requires the reliability coordinator “to be aware of” all interchange transactions that wheel through its reliability coordinator area. NERC contends that it is not possible to measure how an entity is “aware of” specific information. In addition, NERC states that the e-tag system that has been implemented no longer requires the reliability coordinator to collect and relay interchange information

to other entities. If a reliability coordinator needs this information, NERC states that the reliability coordinator can add this item to the list of data and information on its data specification under proposed Requirement R1 of IRO-010-1a.

### **NOPR Proposal**

57. Under section 215(d)(2) of the FPA, the Commission proposes to approve Reliability Standard IRO-005-3, as just, reasonable, not unduly discriminatory or preferential, and in the public interest. The Commission recognizes NERC's efforts to more clearly define which functional entity has the ultimate responsibility for SOLs and IROLs, and to synchronize existing standards with the proposed new IRO Reliability Standards. We propose to find that the requirements of IRO-005-2 proposed for retirement and modification are appropriately addressed in new Reliability Standards IRO-008-1, IRO-009-1, and IRO-010-1a.

### **5. TOP-003-1**

58. NERC proposes to modify Requirement R1.2 of currently-effective Reliability Standard TOP-003-0. To implement this revision, NERC requests approval of proposed Reliability Standard TOP-003-1. The purpose of TOP-003-1 is to require balancing authorities, transmission operators, and reliability coordinators to plan and coordinate scheduled generator and transmission outages that may affect the reliability of interconnected operations. TOP-003-1 would apply to generator operators, transmission operators, balancing authorities, and reliability coordinators.

59. NERC explains that Requirement R1.2 of TOP-003-0 includes two distinct activities – a requirement for the transmission operator to provide the reliability

coordinator and other entities with daily outage information and a requirement for the reliability coordinator to establish outage reporting requirements. NERC contends that both elements of Requirement R1.2 are captured in proposed Reliability Standard IRO-010-1a. NERC proposes to remove the transmission operator's obligation to provide daily outage information to reliability coordinators and strike the requirement for the reliability coordinator to establish outage reporting requirements.

According to NERC, Requirement R1 of proposed IRO-010-1a requires the reliability coordinator to specify what data and information it needs, as well as the frequency and format for providing that data and information. NERC states that, because the reliability coordinator needs outage data for modeling and analysis, the specification will include outage data. Requirement R3 of IRO-010-1a requires entities to provide data and information to the reliability coordinator in accordance with the reliability coordinator's specifications. NERC states that if TOP-003-0 Requirement R1.2 is not modified, it will be redundant with IRO-010-1a, Requirement R3.

### **NOPR Proposal**

60. Under section 215(d)(2) of the FPA, we propose to approve Reliability Standard TOP-003-1, as just, reasonable, not unduly discriminatory or preferential, and in the public interest. We propose to find that the requirements of currently-effective Reliability Standard TOP-003-0 that NERC proposed for modification are appropriately addressed in new Reliability Standard IRO-010-1a. However, under Requirement R3, it is incumbent on the reliability coordinator to request sufficient scheduled outage data. The Commission is concerned that IRO-010-1a does not specify outage coordination data

and the reliability coordinator may not receive adequate outage coordination data to support the Operational Planning Analysis. Therefore, the Commission seeks comments from NERC and the public on whether IRO-010-1a should specify the necessary outage coordination data.

**6. TOP-005-2**

61. NERC proposes to retire Requirements R1 and R1.1 of currently-effective Reliability Standard TOP-005-1 and modify Attachment 1 of the Reliability Standard. To implement these revisions, NERC requests approval of proposed Reliability Standard TOP-005-2. The purpose of TOP-005-2 is to ensure reliability entities have the operating data needed to monitor system conditions within their areas. TOP-005-2 would apply to transmission operators, balancing authorities, and purchasing selling entities.

62. Requirement R1 of TOP-005-1 requires transmission operators to provide the reliability coordinator with the data and information that the reliability coordinator needs to perform its reliability-related tasks. Requirement R1.1 of TOP-005-1 requires reliability coordinators to identify the data requirements, listed in Attachment 1 of TOP-005-1, and any additional operating information requirements relating to the operation of the Bulk-Power System with its reliability coordinator area. NERC states that Requirement R1 implies that the reliability coordinator will limit its use of the data and information it collects to operations within its reliability coordinator area. According to NERC, this does not support the Functional Model, which requires the reliability coordinator to monitor the Wide-Area. NERC states that, under other Reliability Standards such as IRO-014-1 and IRO-015-1, each reliability coordinator is expected to

coordinate the activities within its reliability coordinator area with other reliability coordinators.

63. NERC states that, under proposed Reliability Standard IRO-010-1a, each reliability coordinator must document what data and information it needs and which entities must provide that data. NERC explains that the reliability coordinator needs this data to perform reliability assessments and for real-time monitoring. Under the Functional Model, the reliability coordinator collects data and information not just from transmission operators and balancing authorities, but also from generator operators, load-serving entities, transmission owners, and generator owners.

64. NERC also proposes conforming revisions to Attachment 1 to TOP-005-2. As currently written, Attachment 1 of TOP-005-1 lists the types of data that reliability coordinators, balancing authorities, and transmission operators are expected to provide, and are expected to share with each other. Consistent with the proposed revisions in Reliability Standard TOP-005-2, NERC proposes to remove references to the reliability coordinator from Attachment 1.

### **NOPR Proposal**

65. Under section 215(d)(2) of the FPA, the Commission proposes to approve Reliability Standard TOP-005-2, as just, reasonable, not unduly discriminatory or preferential, and in the public interest. The Commission recognizes NERC's efforts to more clearly define the reliability coordinator's need to know, in advance, what data is needed, insure the timely availability of the data; and how that data will be communicated to other functional entities. We propose to find that the requirements of



TOP-005-1 that are proposed for retirement are appropriately addressed in new Reliability Standard IRO-010-1a. We are concerned, however, about whether the proposal adequately ensures the compatibility of data between neighboring reliability coordinators. Having compatible data allows for an essential level of interoperability. The Commission requests comment from the reliability coordinators and the industry on whether a list of minimum “Electric System Reliability Data,” such as shown in Attachment 1 of currently-effective Reliability Standard TOP-005-1, is beneficial for reliability coordinators to meet the requirements of IRO-008-1 and IRO-009-1.

#### **7. TOP-006-2**

66. NERC proposes to modify Requirement R4 of currently-effective Reliability Standard TOP-006-1. To implement this revision, NERC requests approval of proposed Reliability Standard TOP-006-2. The purpose of TOP-006-2 is to ensure critical reliability parameters are monitored in real-time. Its requirements would be applicable to transmission operators, balancing authorities, generator operators, and reliability coordinators.

67. Requirement R4 of TOP-006-1 requires each reliability coordinator, transmission operator, and balancing authority to have information, including weather forecasts and past load patterns, available to predict the system’s near-term load pattern. NERC proposes to modify Requirement R4 by removing the reference to reliability coordinators. NERC states that the information identified in existing Requirement R4 of TOP-006-1 is not inclusive, and is addressed more globally for the reliability coordinator in Requirements R1 and R3 of the proposed new Reliability Standard IRO-010-1a.

Proposed Requirement R1 of IRO-010-1a requires each reliability coordinator to have a documented specification for data and information to build and maintain models to support real-time monitoring, operational planning analyses, and real-time assessments of its reliability coordinator area to prevent instability, uncontrolled separation, and cascading outages. Requirement R3 of IRO-010-1a requires each balancing authority, generator owner, generator operator, interchange authority, load-serving entity, reliability coordinator, transmission operator, and transmission owner to provide data and information, as specified, to their reliability coordinator.

### **NOPR Proposal**

68. Under section 215(d)(2) of the FPA, the Commission proposes to approve Reliability Standard TOP-006-2, as just, reasonable, not unduly discriminatory or preferential, and in the public interest. The Commission recognizes NERC's efforts to more clearly define the reliability coordinator's need to know, in advance, what load forecast data is needed, the supporting data for the load forecast; and how that data will be communicated to other functional entities. We propose to find that the reliability coordinator functions that are removed from Requirement R4 of TOP-006-2 are appropriately addressed in Requirements R1 and R3 of new Reliability Standard IRO-010-1a.

#### **D. Violation Severity Levels and Violation Risk Factors**

69. In the event of a violation of a Reliability Standard, NERC will establish the initial value range for the corresponding base penalty amount. To do so, NERC will assign a violation risk factor for each requirement of a Reliability Standard that relates to the

expected or potential impact of a violation of the requirement on the reliability of the Bulk-Power System. In addition, NERC will define up to four violation severity levels – Lower, Moderate, High, and Severe – as measurements for the degree to which the requirement was violated in a specific circumstance.

70. In Order No. 705, the Commission approved 63 of NERC's 72 proposed violation risk factors for the version one FAC Reliability Standards and directed NERC to file violation severity level assignments before the version one FAC Reliability Standards become effective.<sup>39</sup> Subsequently, NERC developed violation severity levels for each requirement of the Commission-approved FAC Reliability Standards, as measurements for the degree to which the requirement was violated in a specific circumstance.

71. On June 19, 2008, the Commission issued its Violation Severity Level Order approving the violation severity level assignments filed by NERC for the 83 Reliability Standards approved in Order No. 693.<sup>40</sup> In that order, the Commission offered four guidelines for evaluating the validity of violation severity levels, and ordered a number of reports and further compliance filing to bring the remainder of NERC's violation severity levels into conformance with the Commission's guidelines. The four guidelines are: (1) violation severity level assignments should not have the unintended consequence of lowering the current level of compliance; (2) violation severity level assignments should

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<sup>39</sup> *Facilities Design, Connections and Maintenance Reliability Standards*, Order No. 705, 121 FERC ¶ 61,296, at P 137 (2007).

<sup>40</sup> *Violation Severity Level Order*, 123 FERC ¶ 61,284.

ensure uniformity and consistency among all approved Reliability Standards in the determination of penalties;<sup>41</sup> (3) violation severity level assignments should be consistent with the corresponding requirement; and (4) violation severity level assignments should be based on a single violation, not a cumulative number of violations.<sup>42</sup> The Commission found that these guidelines will provide a consistent and objective means for assessing, *inter alia*, the consistency, fairness and potential consequences of violation severity level assignments. The Commission noted that these guidelines were not intended to replace NERC's own guidance classifications, but rather, to provide an additional level of analysis to determine the validity of violation severity level assignments.

72. On August 10, 2009, NERC submitted an informational filing setting forth a summary of revised guidelines that NERC intends to use in determining the assignment of violation risk factors and violation severity levels for Reliability Standards. NERC states that these revised guidelines were consistent with Commission's guidelines. On May 5, 2010, NERC submitted the subject informational filing as a supplement to its March 5, 2010 Violation Severity Level Order compliance filing.<sup>43</sup>

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<sup>41</sup> Guideline 2 contains two sub-parts: (a) the single violation severity level assignment category for binary requirements should be consistent and (b) violation severity levels assignments should not contain ambiguous language.

<sup>42</sup> *Violation Severity Level Order*, 123 FERC ¶ 61,284 at P 17.

<sup>43</sup> North American Reliability Corporation, *Filing of the North American Electric Reliability Corporation regarding the Assignment of Violation Risk Factors and Violation Severity Levels*, Docket No. RR08-4-005 (filed May 5, 2010).

### **NERC Proposal**

73. NERC proposes a complete set of violation severity levels and violation risk factors for proposed new Reliability Standards IRO-008-1, IRO-009-1, and IRO-010-1a. In addition, NERC proposes to apply the existing set of violation severity levels and violation risk factors assigned to the proposed modified requirements.

74. NERC states that it developed the violation severity levels for the new IRO Reliability Standards before the Commission issued its June 19, 2008 order on violation severity levels.<sup>44</sup> NERC also notes that the proposed violation severity levels were developed before NERC proposed a new methodology for assigning violation severity levels and violation risk factors.<sup>45</sup> As a result, NERC states that some of the proposed violation severity levels do not comport with the Commission's guidelines on violation severity levels and some do not comport with the NERC's revised guidelines. NERC has identified differences and commits to propose revisions to the violation severity levels.

### **NOPR Proposal**

75. The Commission proposes to accept the proposed violation risk factors and violation severity levels presented in NERC's petition. In addition, we propose to accept NERC's commitment to review the proposed violation risk factors and violation severity

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<sup>44</sup> *Id.*

<sup>45</sup> NERC, *Informational Filing Regarding the Assignment of Violation Risk Factors and Violation Severity Levels*, Docket Nos. RM08-11-000, RR07-9-000, and RR07-10-000, (filed Aug. 10, 2009).

levels to ensure compliance with the Commission's guidelines. Accordingly, we propose to direct NERC to submit a compliance filing within six months of the effective date of the final rule in this proceeding that would provide the results of NERC's review including any modifications necessary to comply with the Commission's guidelines on violation risk factors and violation severity levels.

76. The violation risk factors and violation severity levels for proposed new Reliability Standards IRO-008-1, IRO-009-1, and IRO-010-1a, and the proposed modified requirements also would be impacted by NERC's revised guidelines for assigning violation severity levels currently pending before the Commission in Docket No. RR08-4-005. Subject to Commission action on NERC's revised guidelines, NERC may need to make additional revisions to the proposed violation risk factors and violation severity levels.

### **III. Information Collection Statement**

77. The Office of Management and Budget (OMB) regulations require approval of certain information collection requirements imposed by agency rules.<sup>46</sup> Upon approval of a collection(s) of information, OMB will assign an OMB control number and an expiration date. Respondents subject to the filing requirements of this rule will not be penalized for failing to respond to these collections of information unless the collections of information display a valid OMB control number. The Paperwork Reduction Act

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<sup>46</sup> 5 C.F.R 1320.11.

(PRA)<sup>47</sup> requires each federal agency to seek and obtain OMB approval before undertaking a collection of information directed to ten or more persons, or continuing a collection for which OMB approval and validity of the control number are about to expire.<sup>48</sup>

78. The Commission is submitting these reporting and recordkeeping requirements to OMB for its review and approval under section 3507(d) of the PRA. Comments are solicited on the Commission's need for this information, whether the information will have practical utility, the accuracy of provided burden estimates, ways to enhance the quality, utility, and clarity of the information to be collected, and any suggested methods for minimizing the respondent's burden, including the use of automated information techniques.

79. This NOPR proposes to approve three new Reliability Standards, IRO-008-1, IRO-009-1 and IRO-010-1a governing reliability coordinator analyses, operational actions and data collection, which standards will replace parts of the currently-effective Reliability Standards EOP-001-0, IRO-002-1, IRO-004-1, IRO-005-2, TOP-003-0, TOP-005-1 and TOP-006-1 approved by the Commission in Order No. 693. Many of the proposed requirements are based requirements in currently-effective Reliability Standards and match common industry practice. Thus, this proposed rulemaking does not impose

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<sup>47</sup> 44 U.S.C. 3501-20.

<sup>48</sup> 44 U.S.C. 3502(3)(A)(i), 44 U.S.C. 3507(a)(3).

entirely new burdens on the effected entities. With the exception of the addition of Interchange Authority as an applicable entity in IRO-010-1a, the currently-effective standards EOP-001-0, IRO-002-1, IRO-004-1, IRO-005-2, TOP-003-0, TOP-005-1 and TOP-006-1 require actions by the same applicable group of entities. IRO-010-1a clarifies for balancing authorities, generator owners, generator operators, interchange authorities, load-serving entities, reliability coordinators, transmission operators, and transmission owners shall provide data and information, as specified, to the reliability coordinator(s) with which it has a reliability relationship.<sup>49</sup> The requirements of IRO-008-1 and IRO-009-a provide clarification from existing requirements, dictating the analysis and operational roles of the reliability coordinator.

80. Public Reporting Burden: Our estimate below regarding the number of respondents is based on the NERC compliance registry as of September 28, 2010. According to the NERC compliance registry, there are 134 balancing authorities, 824 generator owners, 773 generator operators, 61 interchange authorities, 541 load-serving entities, 26 reliability coordinators, 178 transmission operators, and 332 transmission owners that would be involved in providing information. However, under NERC's compliance registration program, entities may be registered for multiple functions, and as such there is some duplication of functions regarding the number of registered entities that would be required to provide information. Given these parameters, the Commission

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<sup>49</sup> Proposed Reliability Standard IRO-010-1a, Requirement R3



estimates that the Public Reporting burden for the requirements contained in the NOPR is as follows:

| Data Collection   | No. of Respondents | No. of Annual Responses | Hours Per Respondent | Total Annual Hours |
|---|--------------------|-------------------------|----------------------|--------------------|
| FERC-725A   |                    |                         |                      |                    |
| Reliability Coordinators distribution of data specification to entities   | 26                 | 1*                      | 8                    | 208                |
| Balancing Authorities, Generator Owners, Generator Operators, Interchange Authorities, Load-serving Entities, Reliability Coordinators, Transmission Operators, and Transmission Owners reporting data to their Reliability Coordinator | 1501               | 1*                      | 8                    | 12,008             |
| Total   |                    |                         |                      | 12,216             |

\*As needed

- Total Annual hours for Collection: (Reporting + recordkeeping ) = hours.

Information Collection Costs: The Commission seeks comments on the costs to comply with the reporting and recordkeeping burden associated with the proposed

Reliability Standards. It has projected the average annualized cost to be the total annual hours

Recordkeeping = 12,216 hours @ \$120/hour = \$1,465,920.

- Total costs = \$1,465,920.
- Title: Mandatory Reliability Standards for the Bulk-Power System
- Action: Proposed Collection of Information
- OMB Control No: 1902-0244
- Respondents: Business or other for profit, and/or not for profit institutions.
- Frequency of Responses: Annually, or as needed.
- Necessity of the Information: This proposed rule would approve revised

Reliability Standards that create new requirements for reliability coordinator responsibilities. The proposed Reliability Standards require entities to supply required data and information needed by the reliability coordinator.

- Internal review: The Commission has reviewed the requirements pertaining to the proposed Reliability Standards for the Bulk-Power System and determined that the proposed requirements are necessary to meet the statutory provisions of the Energy Policy Act of 2005. These requirements conform to the Commission's plan for efficient information collection, communication and management within the energy industry. The Commission has assured itself, by means of internal review, that there is specific, objective support for the burden estimates associated with the information requirements.

81. Interested persons may obtain information on the reporting requirements by contacting: Federal Energy Regulatory Commission, 888 First Street, NE, Washington,

DC 20426 [Attention: Ellen Brown, Office of the Executive Director, Phone: (202) 502-8663, fax: (202) 273-0873, e-mail: DataClearance@ferc.gov]. Comments on the requirements of this order may also be sent to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503 [Attention: Desk Officer for the Federal Energy Regulatory Commission]. For security reasons, comments should be sent by e-mail to OMB at oira\_submission@omb.eop.gov. Please reference docket number RM10-15-000 in your submission.

#### **IV. Environmental Analysis**

82. The Commission is required to prepare an Environmental Assessment or an Environmental Impact Statement for any action that may have a significant adverse effect on the human environment.<sup>50</sup> The actions proposed here fall within the categorical exclusion in the Commission's regulations for rules that are clarifying, corrective or procedural, for information gathering, analysis, and dissemination.<sup>51</sup> Accordingly, neither an environmental impact statement nor environmental assessment is required.

#### **V. Regulatory Flexibility Act Certification**

83. The Regulatory Flexibility Act of 1980 (RFA)<sup>52</sup> generally requires a description and analysis of final rules that will have significant economic impact on a substantial

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<sup>50</sup> Order No. 486, *Regulations Implementing the National Environmental Policy Act*, 52 FR 47897 (Dec. 17, 1987), FERC Stats. & Regs. ¶ 30,783 (1987).

<sup>51</sup> 18 C.F.R 380.4(a)(5).

<sup>52</sup> 5 U.S.C. 601-12.

number of small entities. The requirements of this rule would apply primarily to reliability coordinators, which do not fall within the definition of small entities.<sup>53</sup>

Moreover, the proposed Reliability Standards reflect a continuation of existing requirements for reliability coordinators and other entities to monitor, analyze, prevent, and mitigate the occurrence of operating limit violations on the Bulk-Power System. The one exception is the proposed new requirements in Reliability Standard IRO-010-1a for interchange authorities, which also do not fall within the definition of small entities.

Based on the foregoing, the Commission certifies that this proposed rule will not have a significant impact on a substantial number of small entities. Accordingly, no regulatory flexibility analysis is required.

## **VI. Comment Procedures**

84. The Commission invites interested persons to submit comments on the matters and issues proposed in this notice to be adopted, including any related matters or alternative proposals that commenters may wish to discuss. Comments are due [insert date that is 60 days from publication in the **FEDERAL REGISTER**]. Comments must refer to Docket No. RM10-15-000, and must include the commenter's name, the organization they represent, if applicable, and their address in their comments.

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<sup>53</sup> The RFA definition of “small entity” refers to the definition provided in the Small Business Act (SBA), which defines a “small business concern” as a business that is independently owned and operated and that is not dominant in its field of operation. *See* 15 U.S.C. 632. According to the SBA, a small electric utility is defined as one that has a total electric output of less than four million MWh in the preceding year.

85. The Commission encourages comments to be filed electronically via the eFiling link on the Commission's web site at <http://www.ferc.gov>. The Commission accepts most standard word processing formats. Documents created electronically using word processing software should be filed in native applications or print-to-PDF format and not in a scanned format. Commenters filing electronically do not need to make a paper filing.

86. Commenters unable to file comments electronically must mail or hand-deliver an original copy of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, NE, Washington, DC 20426. These requirements can be found on the Commission's website, see, e.g., the "Quick Reference Guide for Paper Submissions," available at <http://www.ferc.gov/docs-filing/efiling.asp> or via phone from FERC Online Support at (202) 502-6652 or toll-free at 1-866-208-3676.

87. All comments will be placed in the Commission's public files and may be viewed, printed, or downloaded remotely as described in the Document Availability section below. Commenters on this proposal are not required to serve copies of their comments on other commenters.

## **VII. Document Availability**

88. In addition to publishing the full text of this document in the Federal Register, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the Internet through FERC's Home Page (<http://www.ferc.gov>) and in FERC's Public Reference Room during normal business

hours (8:30 a.m. to 5:00 p.m. Eastern time) at 888 First Street, NE, Room 2A, Washington DC 20426.

89. From FERC's Home Page on the Internet, this information is available on eLibrary. The full text of this document is available on eLibrary in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this document in eLibrary, type the docket number excluding the last three digits of this document in the docket number field.

90. User assistance is available for eLibrary and the FERC's website during normal business hours from FERC Online Support at (202) 502-6652 (toll free at 1-866-208-3676) or email at [ferconlinesupport@ferc.gov](mailto:ferconlinesupport@ferc.gov), or the Public Reference Room at (202) 502-8371, TTY (202) 502-8659. E-mail the Public Reference Room at [public.referenceroom@ferc.gov](mailto:public.referenceroom@ferc.gov).

List of subjects in 18 CFR Part 40

By direction of the Commission.

( S E A L )

Kimberly D. Bose,  
Secretary.

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