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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 40

(Docket No. RM06-16-000; Order No. 693)

Mandatory Reliability Standards for the Bulk-Power System

(Issued March 16, 2007)

AGENCY: Federal Energy Regulatory Commission, DOE.

ACTION: Final Rule.

SUMMARY: Pursuant to section 215 of the Federal Power Act (FPA), the Commission approves 83 of 107 proposed Reliability Standards, six of the eight proposed regional differences, and the Glossary of Terms Used in Reliability Standards developed 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. Those Reliability Standards meet the requirements of section 215 of the FPA and Part 39 of the Commission's regulations. However, although we believe it is in the public interest to make these Reliability Standards mandatory and enforceable, we also find that much work remains to be done. Specifically, we believe that many of these Reliability Standards require significant improvement to address, among other things, the recommendations of the Blackout Report. Therefore, pursuant to section 215(d)(5), we require the ERO to submit significant improvements to 56 of the 83 Reliability Standards that are being approved as mandatory and enforceable. The remaining 24 Reliability Standards will remain pending at the Commission until further information is provided.

The Final Rule adds a new part to the Commission's regulations, which states that this part applies to all users, owners and operators of the Bulk-Power System within the United States (other than Alaska or Hawaii) and requires that each Reliability Standard identify the subset of users, owners and operators to which that particular Reliability Standard applies. The new regulations also require that each Reliability Standard that is approved by the Commission will be maintained on the ERO's Internet website for public inspection.

EFFECTIVE DATE: This rule will become effective **[insert date 60 days from the date the rule is published in the Federal Register]**

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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;
Suedeen G. Kelly, Marc Spitzer,
Philip D. Moeller, and Jon Wellinghoff.

Mandatory Reliability Standards for the Bulk-Power System — Docket No. RM06-16-000

ORDER NO. 693

FINAL RULE

(Issued March 16, 2007)

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I. Introduction

1. Pursuant to section 215 of the Federal Power Act (FPA), the Commission approves 83 of 107 proposed Reliability Standards, six of the eight proposed regional differences, and the Glossary of Terms Used in Reliability Standards (glossary) developed 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. Those Reliability Standards meet the requirements of section 215 of the FPA and Part 39 of the Commission's regulations. However, although we believe it is in the public interest to make these Reliability Standards mandatory and enforceable, we also find that much work remains to be done. Specifically, we believe that many of these Reliability Standards require significant improvement to address, among other things, the recommendations of the Blackout Report.[1] Therefore, pursuant to section 215(d)(5), we require the ERO to submit significant improvements to 56 of the 83 Reliability Standards that are being approved as mandatory and enforceable. The remaining 24 Reliability Standards will remain pending at the Commission until further information is provided.

2. The Final Rule adds a new part to the Commission's regulations, which states that this part applies to all users, owners and operators of the Bulk-Power System within the United States (other than Alaska or Hawaii) and requires that each Reliability Standard identify the subset of users, owners and operators to which that particular Reliability Standard applies. The new regulations also require that each Reliability Standard that is approved by the Commission will be maintained on the ERO's Internet website for public inspection.

A. Background

1. EPAct 2005 and Order No. 672

3. On August 8, 2005, the Electricity Modernization Act of 2005, which is Title XII, Subtitle A, of the Energy Policy Act of 2005 (EPAct 2005), was enacted into law.[2]

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[1] U.S.-Canada Power System Outage Task Force, Final Report on the August 14 Blackout in the United States and Canada: Causes and Recommendations (April 2004) (Blackout Report). The Blackout Report is available on the Internet at http://www.ferc.gov/cust-protect/moi/blackout.asp

[2] Energy Policy Act of 2005, Pub. L. No 109-58, Title XII, Subtitle A, 119 Stat. 594, 941 (2005), to be codified at 16 U.S.C. 824o.

EPAct 2005 adds a new section 215 to the FPA, which 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 may be enforced by the ERO, subject to Commission oversight or the Commission can independently enforce Reliability Standards.[3]

4. On February 3, 2006, the Commission issued Order No. 672, implementing section 215 of the FPA.[4] Pursuant to Order No. 672, the Commission certified one organization, NERC, as the ERO.[5] The ERO is required to develop Reliability Standards, which are subject to Commission review and approval.[6] The Reliability Standards will apply to users, owners and operators of the Bulk-Power System, as set forth in each Reliability Standard.

5. Section 215(d)(2) of the FPA and the Commission's regulations provide that the Commission may approve a proposed Reliability Standard if it determines that the proposal is just, reasonable, not unduly discriminatory or preferential, and in the public interest. The Commission specified in Order No. 672 certain general factors it would

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[3] 16 U.S.C. 824o(e)(3).

[4] Rules Concerning Certification of the Electric Reliability Organization; Procedures for the Establishment, Approval and Enforcement of Electric Reliability Standards, Order No. 672, 71 FR 8662 (February 17, 2006), FERC Stats. & Regs. ¶ 31,204 (2006), order on reh'g, Order No. 672-A, 71 FR 19814 (April 18, 2006), FERC Stats. & Regs. ¶ 31,212 (2006).

[5] North American Electric Reliability Corp., 116 FERC ¶ 61,062 (ERO Certification Order), order on reh'g & compliance, 117 FERC ¶ 61,126 (ERO Rehearing Order) (2006), order on compliance, 118 FERC ¶ 61,030 (2007) (January 2007 Compliance Order).

[6] Section 215(a)(3) of the FPA defines the term Reliability Standard to mean "a requirement, approved by the Commission under this section, to provide for reliable operation of the Bulk-Power System. This term includes requirements for the operation of existing Bulk-Power System facilities, including cybersecurity protection, and the design of planned additions or modifications to such facilities to the extent necessary to provide for the reliable operation of the Bulk-Power System, but the term does not include any requirement to enlarge such facilities or to construct new transmission capacity or generation capacity." 16 U.S.C. 824o(a)(3).

consider when assessing whether a particular Reliability Standard is just and reasonable.[7] According to this guidance, a Reliability Standard must provide for the Reliable Operation of Bulk-Power System facilities and may impose a requirement on any user, owner or operator of such facilities. It must be designed to achieve a specified reliability goal and must contain a technically sound means to achieve this goal. The Reliability Standard should be clear and unambiguous regarding what is required and who is required to comply. The possible consequences for violating a Reliability Standard should be clear and understandable to those who must comply. There should be clear criteria for whether an entity is in compliance with a Reliability Standard. While a Reliability Standard does not necessarily need to reflect the optimal method for achieving its reliability goal, a Reliability Standard should achieve its reliability goal effectively and efficiently. A Reliability Standard must do more than simply reflect stakeholder agreement or consensus around the "lowest common denominator." It is important that the Reliability Standards developed through any consensus process be sufficient to adequately protect Bulk-Power System reliability.[8]

6. A Reliability Standard may take into account the size of the entity that must comply and the costs of implementation. A Reliability Standard should be a single standard that applies across the North American Bulk-Power System to the maximum extent this is achievable taking into account physical differences in grid characteristics and regional Reliability Standards that result in more stringent practices. It can also account for regional variations in the organizational 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. Finally, a Reliability Standard should have no undue negative effect on competition.[9]

7. Order No. 672 directs the ERO to explain how the factors the Commission identified are satisfied and how the ERO balances any conflicting factors when seeking approval of a proposed Reliability Standard.[10]

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[7] Order No. 672 at P 262, 321-37.

[8] Id. at P 329.

[9] Id. at P 332.

[10] Id. at P 337.

8. Pursuant to section 215(d)(2) of the FPA and § 39.5(c) 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 or to a Regional Entity organized on an Interconnection-wide basis with respect to a proposed Reliability Standard or a proposed modification to a Reliability Standard to be applicable within that Interconnection. However, the Commission will not defer to the ERO or to such a Regional Entity with respect to the effect of a proposed Reliability Standard or proposed modification to a Reliability Standard on competition.[11]

9. The Commission's regulations require the ERO to file with the Commission each new or modified Reliability Standard that it proposes to be made effective under section 215 of the FPA. The filing must include a concise statement of the basis and purpose of the proposed Reliability Standard, a summary of the Reliability Standard development proceedings conducted by either the ERO or Regional Entity, together with a summary of the ERO's Reliability Standard review proceedings, and a demonstration that the proposed Reliability Standard is just, reasonable, not unduly discriminatory or preferential and in the public interest.[12]

10. Where a Reliability Standard requires significant improvement, but is otherwise enforceable, the Commission approves the Reliability Standard. In addition, as a distinct action under the statute, the Commission directs the ERO to modify such a Reliability Standard, pursuant to section 215(d)(5) of the FPA, to address the identified issues or concerns. This approach will allow the proposed Reliability Standard to be enforceable while the ERO develops any required modifications.

11. The Commission will remand to the ERO for further consideration a proposed new or modified Reliability Standard that the Commission disapproves in whole or in part.[13] When remanding a Reliability Standard to the ERO, the Commission may order a deadline by which the ERO must submit a proposed or modified Reliability Standard.

2. NERC Petition for Approval of Reliability Standards

12. On April 4, 2006, as modified on August 28, 2006, NERC submitted to the Commission a petition seeking approval of the 107 proposed Reliability Standards that

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[11] 18 CFR 39.5(c)(1), (3).

[12] 18 CFR 39.5(a).

[13] 18 CFR 39.5(e).

are the subject of this Final Rule.[14] According to NERC, the 107 proposed Reliability Standards collectively define overall acceptable performance with regard to operation, planning and design of the North American Bulk-Power System. Seven of these Reliability Standards specifically incorporate one or more "regional differences" (which can include an exemption from a Reliability Standard) for a particular region or subregion, resulting in eight regional differences. NERC stated that it simultaneously filed the proposed Reliability Standards with governmental authorities in Canada. The Commission addresses these proposed Reliability Standards in this rulemaking proceeding.[15]

13. On November 15, 2006, NERC filed 20 revised proposed Reliability Standards and three new proposed Reliability Standards for Commission approval. The 20 revised Reliability Standards primarily provided additional Measures and Levels of Non-Compliance, but did not add or revise any existing Requirements to these Reliability Standards. NERC requested that the 20 revised proposed Reliability Standards be included as part of the Final Rule issued by the Commission in this docket. The proposed new Reliability Standards, FAC-010-1, FAC-011-1, and FAC-014-1, will be addressed in a separate rulemaking proceeding in Docket No. RM07-3-000.

14. On December 1, 2006, NERC submitted in Docket No. RM06-16-000 an informational filing entitled "NERC's Reliability Standards Development Plan: 2007 — 2009" (Work Plan). NERC stated it was submitting the Work Plan to inform the Commission of NERC's program to improve the Reliability Standards that currently are the subject of the Commission's rulemaking proceeding.

3. Staff Preliminary Assessment and Commission NOPR

15. On May 11, 2006, Commission staff issued a "Staff Preliminary Assessment of the North American Electric Reliability Council's Proposed Mandatory Reliability Standards" (Staff Preliminary Assessment). The Staff Preliminary Assessment identifies staff's observations and concerns regarding NERC's then-current voluntary Reliability

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[14] The filed proposed Reliability Standards are not attached to the Final Rule but are available on the Commission's eLibrary document retrieval system in Docket No. RM06-16-000 and are available on the ERO's website, http://www.nerc.com/~filez/nerc_filings_ferc.html.

[15] Eight proposed Reliability Standards submitted in the August 29, 2006 filing that relate to cyber security, Reliability Standards CIP-002 through CIP-009, will be addressed in a separate rulemaking proceeding in Docket No. RM06-22-000.

Standards. The Staff Preliminary Assessment describes issues common to a number of proposed Reliability Standards. It reviews and identifies issues regarding each individual Reliability Standard but did not make specific recommendations regarding the appropriate Commission action on a particular proposal.

16. Comments on the Staff Preliminary Assessment were due by June 26, 2006. Approximately 50 entities filed comments in response to the Staff Preliminary Assessment. In addition, on July 6, 2006, the Commission held a technical conference to discuss NERC's proposed Reliability Standards, the Staff Preliminary Assessment, the comments and other related issues.

4. Notice of Proposed Rulemaking

17. The Commission issued the NOPR on October 20, 2006, and required that comments be filed within 60 days after publication in the Federal Register, or January 2, 2007.[16] The Commission granted the request of several commenters to extend the comment date to January 3, 2007. Several late-filed comments were filed. The Commission will accept these late-filed comments. A list of commenters appears in Appendix A.

18. On November 27, 2006, the Commission issued a notice on the 20 revised Reliability Standards filed by NERC on November 15, 2006. In the notice, the Commission explained that, because of their close relationship with Reliability Standards dealt with in the October 20, 2006 NOPR, the Commission would address these 20 revised Reliability Standards in this proceeding.[17] The notice provided an opportunity to comment on the revised Reliability Standards, with a comment due date of January 3, 2007.

19. The Commission issued a notice on NERC's Work Plan on December 8, 2006. While the Commission sought public comment on NERC's filing because it was informative on the prioritization of modifying Reliability Standards raised in the NOPR,

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[16] Mandatory Reliability Standards for the Bulk Power System, Notice of Proposed Rulemaking, 71 FR 64,770 (Nov. 3, 2006), FERC Stats. & Regs., Vol IV, Proposed Regulations, ¶ 32,608 (2006).

[17] The modified 20 Reliability Standards are: CIP-001-1; COM-001-1; COM-002-2; EOP-002-2; EOP-003-1; EOP-004-1; EOP-006-1; INT-001-2; INT-003-2; IRO-001-1; IRO-002-1; IRO-003-2; IRO-005-2; PER-004-1; PRC-001-1; TOP-001-1; TOP-002-2; TOP-004-1; TOP-006-1; and TOP-008-1.

the notice emphasized that the Work Plan was filed for informational purposes and NERC stated that it is not requesting Commission action on the Work Plan.

20. On February 6, 2007, NERC submitted a request for leave to file supplemental information, and included a revised version of the NERC Statement of Compliance Registry Criteria (Revision 3). NERC noted that it had submitted with its NOPR comments an earlier version of the same document.[18]

II. Discussion

A. Overview

1. The Commission's Underlying Approach to Review and Disposition of the Proposed Standards

21. In this Final Rule, the Commission takes the important step of approving the first set of mandatory and enforceable Reliability Standards within the United States in accordance with the provisions of new section 215 of the FPA. The Commission's action herein marks the official departure from reliance on the electric utility industry's voluntary compliance with Reliability Standards adopted by NERC and the regional reliability councils and the transition to the mandatory, enforceable Reliability Standards under the Commission's ultimate oversight through the ERO and, eventually, the Regional Entities, as directed by Congress. As we discuss more fully below, in deciding whether to approve, approve and direct modifications, or remand each of the proposed Reliability Standards in this Final Rule, our overall approach has been one of carefully balancing the need for practicality during the time of transition with the imperatives of section 215 of the FPA and Order No. 672, and other considerations.

22. In addition, our action today is informed by the August 14, 2003 blackout which affected significant portions of the Midwest and Northeast United States and Ontario, Canada and impacted an estimated 50 million people and 61,800 megawatts of electric load. As noted in the NOPR, a joint United States-Canada task force found that the blackout was caused by several entities violating NERC's then-effective policies and Reliability Standards.[19] Those violations directly contributed to the loss of a significant amount of electric load. The joint task force identified both the need for legislation to make Reliability Standards mandatory and enforceable with penalties for noncompliance,

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[18] See NERC comments, Attachment B.

[19] NOPR at P 14.

as well as particular Reliability Standards that needed corrections to make them more effective in preventing blackouts. Indeed, the August 2003 blackout and the recommendations of the joint task force helped foster enactment of EPAct 2005 and new section 215 of the FPA.

2. Mandates of Section 215 of the FPA

23. The imperatives of section 215 of the FPA address not only the protection of the reliability of the Bulk-Power System but also the reliability roles of the Commission, the ERO, the Regional Entities, and the owners, users and operators of the Bulk-Power System.[20] First, section 215 specifies that the ERO is to develop and enforce a comprehensive set of Reliability Standards subject to Commission review. Section 215 explains that a Reliability Standard is a requirement approved by the Commission that is intended to provide for the Reliable Operation of the Bulk-Power System. Such requirement may pertain to the operation of existing Bulk-Power System facilities, including cybersecurity protection, or it may pertain to the design of planned additions or modifications to such facilities to the extent necessary to provide for reliable operation of the Bulk-Power System.[21]

24. Second, the reliability mandate of section 215 of the FPA addresses not only the comprehensive maintenance of the reliable operation of each of the elements of the Bulk-Power System, it also contemplates the prevention of incidents, acts and events that would interfere with the reliable operation of the Bulk-Power System. Further, section 215 seeks to prevent an instability, an uncontrolled separation or a cascading failure, whether resulting from either a sudden disturbance, including a cybersecurity incident, or an unanticipated failure of the system elements. In order to avoid these outcomes, the

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[20] Generally speaking, the nation's Bulk-Power System has been described as consisting of "generating units, transmission lines and substations, and system controls." Maintaining Reliability in a Competitive U.S. Electricity Industry, Final Report of the Task Force on Electric System Reliability, Secretary of Energy Advisory Board, U.S. Department of Energy (September 1998) at 2, 6-7. The transmission component of the Bulk-Power System is understood to provide for the movement of power in bulk to points of distribution for allocation to retail electricity customers. Essentially, transmission lines and other parts of the transmission system, including control facilities, serve to transmit electricity in bulk from generation sources to concentrated areas of retail customers, while the distribution system moves the electricity to where these retail customers consume it at a home or business.

[21] 16 U.S.C. 824o(a)(3).

various elements and components of the Bulk-Power System are to be operated within equipment and electric system thermal, voltage and stability limits.[22]

25. Third, section 215 of the FPA explains that the Bulk-Power System broadly encompasses both the facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) as well as the electric energy from generation facilities needed to maintain transmission system reliability.[23] Further, section 215 explains that the interconnected transmission network within an Interconnection is a geographic area in which the operation of Bulk-Power System components is synchronized such that the failure of one such component, or more than one such component, may adversely affect the ability of the operators of other components within the system to maintain reliable operation of the facilities within their control.[24] A Cybersecurity Incident is explained to be a malicious act that disrupts or attempts to disrupt the operation of programmable electronic devices and communication networks including hardware, software or data that are essential to the reliable operation of the Bulk-Power System.[25]

26. Next, as to the reliability roles of the Commission and others, section 215 of the FPA explains that the ERO must file each of its Reliability Standards and any modification thereto with the Commission.[26] The Commission will consider a number of factors before taking any action with respect thereto. We may approve the Reliability Standard or its modification only if we determine that it is just, reasonable, and not unduly discriminatory or preferential and in the public interest to do so. Also, in doing so, we are instructed to give due weight to the technical expertise of the ERO concerning

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[22] "The term 'reliable operation' means operating the elements of the Bulk-Power System within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements." 16 U.S.C. 824o(a)(4).

[23] 16 U.S.C. 824o(a)(1).

[24] 16 U.S.C. 824o(a)(5).

[25] 16 U.S.C. 824o(a)(8).

[26] "The Electric Reliability Organization shall file each Reliability Standard or modification to a Reliability Standard that it proposes to be made effective under this section with the Commission." 16 U.S.C. 824o(d)(1).

the content of a proposed standard or a modification thereto. We must also give due weight to an Interconnection-wide Regional Entity with respect to a proposed Reliability Standard to be applicable within that Interconnection, except for matters concerning the effect on competition.[27]

27. Similarly, in considering whether to forward a proposed Reliability Standard to the Commission for approval, the ERO must rebuttably presume that a proposal from a Regional Entity organized on an Interconnection-wide basis for a Reliability Standard or modification to a Reliability Standard to be applicable on an Interconnection-wide basis is just, reasonable, and not unduly discriminatory or preferential, and in the public interest.[28] The Commission may also give deference to the advice of a Regional Advisory Body organized on an Interconnection-wide basis in regard to whether a proposed Reliability Standard is just, reasonable and not unduly discriminatory or preferential and in the public interest, as it may apply within the region.[29]

28. Finally, the Commission is further instructed to remand to the ERO for further consideration any standard or modification that it does not approve in whole or part.[30] We may also direct the ERO to submit a proposed Reliability Standard or modification that addresses a specific problem if we consider this course of action to be appropriate.[31] Further, if we find that a conflict exists between a Reliability Standard and any function, rule, order, tariff, rate schedule, or agreement accepted, approved, or ordered by the

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[27] "The Commission may approve, by rule or order, a proposed Reliability Standard or modification to a Reliability Standard if it determines that the standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest. The Commission shall give due weight to the technical expertise of the Electric Reliability Organization with respect to the content of a proposed standard or modification to a Reliability Standard and to the technical expertise of a regional entity organized on an Interconnection-wide basis with respect to a Reliability Standard to be applicable within that Interconnection, but shall not defer with respect to the effect of a standard on competition. A proposed standard or modification shall take effect upon approval by the Commission." 16 U.S.C. 824o(d)(2).

[28] 16 U.S.C. 824o(d)(3).

[29] 16 U.S.C. 824o(j).

[30] 16 U.S.C. 824o(d)(4).

[31] 16 U.S.C. 824o(d)(5).

Commission applicable to a transmission organization,[32] and if we determine that the Reliability Standard needs to be changed as a result of such a conflict, we must order the ERO to develop and file with the Commission a modified Reliability Standard for this purpose.[33]

3. Balancing the Need for Practicality with the Mandates of Section 215 and Order No. 672

29. In enacting section 215, Congress chose to expand the Commission's jurisdiction beyond our historical role as primarily an economic regulator of the public utility industry under Part II of the FPA. Many entities not previously touched by our economic regulatory oversight are within our reliability purview and these entities will have to familiarize themselves not only with the new reliability obligations under section 215 of the FPA and the Reliability Standards that we are approving in this Final Rule, but also any proposed Reliability Standards or improvements that may implicate them that are under development by the ERO and the Regional Entities.[34] We have taken these and other considerations into account and have tried to reach an appropriate balance among them.

30. First, we have decided, as proposed in our NOPR, to approve most of the Reliability Standards that the ERO submitted in this proceeding, even though concerns with respect to many of the Reliability Standards have been voiced. As most of these

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[32] Under section 215, a transmission organization is a RTO, ISO, independent transmission provider or other Transmission Organization finally approved by the Commission for the operation of transmission facilities. 16 U.S.C. 824o(a)(6).

[33] 16 U.S.C. 824o(d)(6).

[34] Section 215(b) of the FPA provides that, for purposes of approving Reliability Standards and enforcing compliance with such standards, the Commission shall have jurisdiction over those entitles that had previously been excluded under section 201(f) of the FPA. Section 201(f) excludes the United States, a state or any political subdivision of a state, an electric cooperative that receives financing under the Rural Electrification Act of 1936, 7 U.S.C. 901 et seq., or that sells less than 4,000,000 megawatt hours of electricity per year, or any agency, authority, or instrumentality of any one or more of the foregoing, or any corporation which is wholly owned, directly or indirectly, by any one or more of the foregoing, or any officer, agent, or employee of any of the foregoing acting as such in the course of his official duty, unless such provision makes specific reference thereto. 16 U.S.C. 824(f).

Reliability Standards are already being adhered to on a voluntary basis, we are concerned that to remand them and leave no standard in place in the interim would not help to ensure reliability when such standards could be improved over time. In these cases, however, the concerns highlighted below merit the serious attention of the ERO and we are directing the ERO to consider what needs to be done and how to do so, often by way of descriptive directives.[35]

31. We emphasize that we are not, at this time, mandating a particular outcome by way of these directives, but we do expect the ERO to respond with an equivalent alternative and adequate support that fully explains how the alternative produces a result that is as effective as or more effective that the Commission's example or directive.

32. We have sought to provide enough specificity to focus the efforts of the ERO and others adequately. We are also sensitive to the concern of the Canadian Federal Provincial Territorial Working Group (FPT) about the status of an existing standard that is already being followed on a voluntary basis. The FPT suggests, for example, that instead of remanding an existing Reliability Standard, the Commission should conditionally approve the standard pending its modification.[36] We believe the action we take today is similar in many respects to this approach.

33. We have also adopted a number of other measures to mitigate many of the difficulties associated with the electric utility industry's preparation for and transition to

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[35] In Order No. 672, we decided, in response to some commenters' suggestions that a Reliability Standard should address the "what" and not the "how" of reliability and that the actual implementation should be left to entities such as control area operators and system planners, that in some limited situations, there may be good reason to do so but, for the most part, in other situations the "how" may be inextricably linked to the Reliability Standard and may need to be specified by the ERO to ensure the enforcement of the standard. Since leaving out implementation features could sacrifice necessary uniformity, create uncertainty for the entity that has to follow the standard, make enforcement difficult, or increase the complexity of the Commission's oversight and review process, we left it to the ERO to reach the appropriate balance between reliability principles and implementation features. Order No. 672 at P 260. We also decided that the Commission's authority to order the ERO to address a particular reliability topic is not in conflict with other provisions of Order No. 672 that assigned the responsibility for developing a proposed Reliability Standard to the ERO. Order No. 672 at P 416.

[36] FPT letter to Chairman Kelliher (submitted on July 10, 2006) (placed in the record of this proceeding).

mandatory Reliability Standards. For instance, we are directing the ERO and Regional Entities to focus their enforcement resources during an initial period on the most serious Reliability Standard violations. Moreover, because commenters have raised valid concerns as discussed below, our Final Rule relies on the existing NERC definition of bulk electric system and its compliance registration process to provide as much certainty as possible regarding the applicability and responsibility of specific entities under the approved standards. This approach should also assuage the concerns of many smaller entities.

B. Discussion of the Commission's New Regulations

1. Applicability

34. In the NOPR, the Commission proposed to add § 40.1(a) to the regulations. The Commission proposed that § 40.1(a) would provide that this Part applies to all users, owners and operators of the Bulk-Power System within the United States (other than Alaska and Hawaii) including, but not limited to, the entities described in section 201(f) of the FPA. This statement is consistent with section 215(b) of the FPA and § 39.2 of the Commission's regulations.

35. The Commission further proposed to add § 40.1(b), which would require each Reliability Standard made effective under this Part to identify the subset of users, owners and operators to whom that particular Reliability Standard applies.

a. Comments

36. NERC agrees with the Commission's proposal to add the text of § 40.1(b) to its regulations to require that each Reliability Standard identify the subset of users, owners and operators to which that particular Reliability Standard applies and believes this requirement is currently established in NERC's Rules of Procedure.

37. TANC supports proposed § 40.1. It states that requiring each Reliability Standard to identify the subset of users, owners and operators to whom it applies, thereby limiting the scope of the broad phrase "users, owners and operators," is a critical step to removing ambiguities from the Reliability Standards. According to TANC, the proposed text of § 40.1 would eliminate ambiguities with regard to the entity responsible for complying with each Reliability Standard. In this way, Regional Entities and other interested parties will be allowed to weigh in during the Reliability Standards development process on the breadth of each standard and may urge NERC to accept any necessary regional variations that are necessary to maintain adequate reliability within the region.

38. APPA believes that the Commission's proposal to add § 40.1 and 40.2 to its regulations is generally appropriate and acceptable, but the regulatory language should be amended to make clear the exact universe of users, owners and operators of the Bulk-Power System to which the mandatory Reliability Standards apply. It recommends that the regulations provide that determinations as to applicability of standards to particular entities shall be resolved by reference to the NERC compliance registry.

b. Commission Determination

39. The Commission adopts the NOPR's proposal to add § 40.1 to the Commission's regulations. The Commission disagrees with APPA's suggestion to define here the exact universe of users, owners and operators of the Bulk-Power System to which the mandatory Reliability Standards apply. Rather, consistent with NERC's existing approach, we believe that it is appropriate that each Reliability Standard clearly identify the subset of users, owners and operators to which it applies and the Commission determines applicability on that basis. As we discuss later, we approve NERC's current compliance registry to provide certainty and stability in identifying which entities must comply with particular Reliability Standards.

2. Mandatory Reliability Standards

40. The Commission proposed to add § 40.2(a) to the Commission's regulations. The proposed regulation text would require that each applicable user, owner and operator of the Bulk-Power System comply with Commission-approved Reliability Standards developed by the ERO, and would provide that the Commission-approved Reliability Standards can be obtained from the Commission's Public Reference Room at 888 First Street, N.E., Room 2A, Washington, D.C., 20426.

41. The Commission further proposed to add § 40.2(b) to its regulations, providing that a modification to a Reliability Standard proposed to become effective pursuant to § 39.5 shall not be effective until approved by the Commission.

a. Comments

42. NERC concurs with the Commission's proposal to require NERC to provide to the Commission a copy of all approved Reliability Standards for posting in its Public Reference Room. NERC agrees with the Commission that neither the text nor the title of an approved Reliability Standard should be codified in the Commission's regulations.

b. Commission Determination

43. For the reasons discussed in the NOPR, the Commission generally adopts the NOPR's proposal to add § 40.2 to the Commission's regulations.[37] However, after consideration, the Commission has determined that it is not necessary to have the approved Reliability Standards on file in the Commission's public reference room and on the NERC website. Therefore, we will require that all Commission-approved Reliability Standards be available on the ERO's website, with an effective date, and revise § 40.2(b) to remove the following language: "which can be obtained from the Commission's Public Reference Room at 888 First Street, N.E., Room 2A, Washington, D.C., 20426." Further, to be consistent with Part 39 of our regulations, we remove the reference to NERC and replace it with "Electric Reliability Organization."

3. Availability of Reliability Standards

44. The Commission proposed to add § 40.3 to the regulation text, which requires that the ERO maintain in electronic format that is accessible from the Internet the complete set of effective Reliability Standards that have been developed by the ERO and approved by the Commission. The Commission stated that it believes that ready access to an electronic version of the effective Reliability Standards will enhance transparency and help avoid confusion as to which Reliability Standards are mandatory and enforceable. We noted that NERC currently maintains the existing, voluntary Reliability Standards on the NERC website.

45. While the NOPR discusses each Reliability Standard and identifies the Commission's proposed disposition for each Reliability Standard, we did not propose to codify either the text or the title of an approved Reliability Standard in the Commission's regulations. Rather, we proposed that each user, owner or operator of the Bulk-Power System must comply with applicable Commission-approved Reliability Standards that are available in the Commission's Public Reference Room and on the Internet at the ERO's website. We stated that this approach is consistent with the statutory options of approving a proposed Reliability Standard or modification to a Reliability Standard "by rule or order."[38]

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[37] NOPR at P 37.

[38] See 16 U.S.C. 824o(d)(2).

a. Comments

46. NERC states that it can successfully implement the Commission's proposal to require NERC to maintain in electronic format that is accessible from the Internet the complete set of Reliability Standards that have been developed by the ERO and approved by the Commission. NERC currently maintains a public website displaying the existing, voluntary Reliability Standards for access by users, owners and operators of the Bulk-Power System. Once the proposed Reliability Standards are approved by the Commission, NERC will modify its website to distinguish which Reliability Standards have been approved by the Commission for enforcement in the United States.

47. EEI states that the approval of Reliability Standards should be through a rulemaking rather than an order, except in very rare circumstances, because of the open nature of the rulemaking process. Where the Commission decides to proceed by order, EEI states that the Commission should give notice and an opportunity to comment on any proposed Reliability Standards.

b. Commission Determination

48. For the reasons discussed in the NOPR, the Commission adopts the NOPR's proposal to add § 40.3 to the Commission's regulations; however the Commission has further clarified the proposed regulatory text.[39] We clarify that the ERO must post on its website the currently effective Reliability Standards as approved and enforceable by the Commission. Further, we require the effective date of the Reliability Standards must be included in the posting.

49. In response to EEI, the Commission anticipates that it will address most, if not all, new Reliability Standards proposed by NERC through a rulemaking process. However, we retain the flexibility to address matters by order where appropriate, consistent with the statute and our regulations.[40] In Order No. 672, the Commission stated that it would provide notice and opportunity for public comment except in extraordinary circumstances and, on rehearing, clarified that any decision by the Commission not to provide notice

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[39] NOPR at P 39-41.

[40] See 16 U.S.C. 824o(d)(2) ("the Commission may approve, by rule or order, a proposed Reliability Standard or modification . . ."); 18 CFR 39.5(c).

and comment when reviewing a proposed Reliability Standard will be made in accordance with the criteria established in section 553 of the Administrative Procedure Act.[41]

C. Applicability Issues

1. Bulk-Power System v. Bulk Electric System

50. The NOPR observed that, for purposes of section 215, "Bulk-Power System" means:

> (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) and (B) electric energy from generating facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy.

51. The NERC glossary, in contrast, states that Reliability Standards apply to the "bulk electric system," which is defined by its regions in terms of a voltage threshold and configuration, as follows:

> As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.[42]

52. In the NOPR, the Commission proposed that, for the initial approval of proposed Reliability Standards, the continued use of NERC's definition of bulk electric system as set forth in the NERC glossary is appropriate.[43] However, the Commission interpreted the term "bulk electric system" to apply to: (1) all of the ≥ 100 kV transmission systems and any underlying transmission system (< 100 kV) that could limit or supplement the

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[41] See Order No. 672 at P 308; Order No 672-A at P 26.

[42] NERC Glossary at 2. All citations to the Glossary in this Final Rule refer to the November 1, 2006 version filed on November 15, 2006.

[43] NOPR at P 66-70. The Commission explained in the NOPR that regional definitions had not been submitted and it would not determine the appropriateness of any regional definition in the current rulemaking proceeding. Id. at n. 56.

operation of the higher voltage transmission systems and (2) transmission to all significant local distribution systems (but not the distribution system itself), transmission to load centers and transmission connecting generation that supplies electric energy to the system. The Commission proposed that, if a question arose concerning which underlying transmission system limits or supplements the operation of the higher voltage transmission system, the ERO would determine the matter on a case-by-case basis.

53. The Commission solicited comment on its interpretation and whether the Regional Entities should, in the future, play a role in either defining the facilities that are subject to a Reliability Standard or be allowed to determine an exception on a case-by-case basis.

54. Further, the NOPR explained that continued reliance on multiple regional interpretations of the NERC definition of bulk electric system, which omits significant portions of the transmission system component of the Bulk-Power System that serve critical load centers, is not appropriate. Thus, the NOPR proposed that, in the long run, NERC revise the current definition of bulk electric system to ensure that all facilities, control systems and electric energy from generation resources that impact system reliability are included within the scope of applicability of Reliability Standards, and that NERC's revision is consistent with the statutory term Bulk-Power System.

a. Comments

55. Most commenters, including NERC, NARUC, APPA, National Grid, EEI and Ontario IESO, believe that the Commission should only impose Reliability Standards on those entities that fall under NERC's definition of bulk electric system as it existed under the voluntary regime. They state that, by extending the definition of bulk electric system, the Commission goes beyond what is necessary to protect Bulk-Power System reliability, creates uncertainty and will divert resources from monitoring compliance of those entities that could have a material impact on Bulk-Power System reliability.

56. Entergy, however, agrees with the Commission that NERC's definition of bulk electric system is not adequate and agrees with the Commission's proposed interpretation. ISO-NE does not oppose the NOPR's approach on how to interpret the term "Bulk-Power System," but it states that this broader scope justifies a delay in the date civil penalties take effect, to January 1, 2008, to provide the industry sufficient time to review the Commission's Final Rule and to adjust to the expanded reach of the Reliability Standards.

57. NERC, APPA and NRECA maintain that there was no intentional distinction made by Congress between "Bulk-Power System" (as defined in section 215) and the "bulk electric system" (as defined by the NERC glossary). NERC asserts that recent discussions with stakeholders confirm NERC's belief that there was no distinction

intended. Moreover, NERC is not aware of any documentation that suggests a distinction was intended. NRECA argues that legislative intent and prior usage do not support the Commission's approach to defining the Bulk-Power System. NRECA concedes that no conference committee report accompanied EPAct 2005, but it notes that the Congressional Research Service specifies in its manual on statutory interpretation that "[W]here Congress borrows terms of art in which are accumulated the legal tradition and meaning of centuries of practice, it presumably knows and adopts the cluster of ideas that were attached to each borrowed word in the body of learning from which it was taken."[44]

58. TAPS states that the Commission cannot lawfully "interpret" the bulk electric system definition contrary to its terms. According to TAPS, the Commission cannot include facilities below 100 kV "that could limit or supplement the operation of the higher voltage transmission systems," in the bulk electric system, even if they are "necessary for operating" the bulk system, because these facilities are not included in NERC's definition of bulk electric system.

59. NERC states that the Commission's proposal that NERC's "bulk electric system" should apply to all of the equal to or greater than 100 kV transmission systems and any underlying transmission system (less than 100 kV) that could limit or supplement the operation of the higher voltage transmission systems is a significant expansion over what the industry has historically regarded as the bulk electric system, both in terms of the facilities covered and the entities involved. While NERC agrees with the Commission that Congress intended to give the Commission broad jurisdiction over the reliability of the Bulk-Power System, it does not believe this is the right time for the Commission to define the full extent of its jurisdiction or that the approach proposed in the NOPR is the right way to do so. In addition, NERC does not believe it is legally necessary for the Commission to extend its jurisdiction to the limits in a single step.

60. NERC states that the Commission should make clear in this Final Rule that its jurisdiction is at least as broad as the historic NERC definition of "bulk electric system" and that the Commission will use that definition for the near term. NERC asserts that the Commission should also make clear that it is not deciding in this docket the full scope of its jurisdiction and is reserving its right to consider a broader definition. Instead, NERC states that the Commission should focus on approving an initial set of Reliability Standards for the core set of users, owners and operators that have the most significant impact on the reliability of the Bulk-Power System. NERC maintains that this core set has been defined through its use of the terms "bulk electric system" and "responsible entities" provided in the NERC Glossary, the "Applicability" section of each Reliability

[44] NRECA, citing Morissette v. United States, 342 U.S. 246, 263 (1952).

Standard and substantive requirements of the standards themselves, and NERC's registration of specific entities that are responsible for compliance with the Reliability Standards.

61. NRECA argues that the definition of "Bulk-Power System" contained in section 215(a)(1) reflects Congressional intent to codify the established materiality component because Congress limited the definition of Bulk-Power System to facilities and control systems necessary for operating an interconnected electric energy transmission network and electric energy from generation facilities needed to maintain transmission system reliability. NRECA argues that these limiting terms mean that not all transmission facilities are included. In NRECA's view, the definition of the Bulk-Power System within the meaning of section 215 cannot extend to radial facilities to "significant local distribution systems," "load centers," or local transmission facilities unless otherwise "necessary for" (i.e., material to) the reliable operation of the interconnected grid. Further, NRECA states that the definition of "Reliable Operation" in section 215(a) focuses on the reliable operation of the Bulk-Power System and not the protection of local load per se.

62. Certain commenters assert that expanding the scope of the Commission's jurisdiction and the scope of the Reliability Standards in this proceeding would be an unanticipated expansion of the reach of the existing Reliability Standards implemented with insufficient due process and may cause jurisdictional concerns.[45] They state that the Reliability Standards under consideration were developed and approved through NERC's Reliability Standards development process with the intention that they would apply based on the industry's historical conception of the bulk electric system and that the outcome might have been different using the Commission's proposed definition. NERC therefore argues that it would be inappropriate to assume that the requirements of the existing Reliability Standards would be relevant to an expanded set of entities or an expanded scope of facilities under a broader definition of the Bulk-Power System. NERC also asserts that there is no reasonable justification for subjecting "thousands of small entities" to the costs of compliance with the Reliability Standards when there is no reasonable justification to do so in terms of incremental benefit to the reliability of the Bulk-Power System.

63. NRECA, APPA and others argue that the Commission's interpretation would undermine, rather than promote, reliability. According to these commenters, the Commission's interpretation would require new definitions, such as one for "load center," and otherwise creates confusion. For example, Small Entities Forum states that

[45] See, e.g., NERC, TAPS and NRECA.

it is concerned with the inclusion of "transmission connecting generation that supplies electric energy to the system" because that could include any transmission connected to any generation of any size.

64. APPA objects to the Commission's statement that "[t]he transmission system component of the Bulk-Power System is understood to provide for the movement of power in bulk to points of distribution for allocation to retail electricity customers." APPA states that it does not believe there is an industry "understanding" that the bulk electric system or the Bulk-Power System necessarily encompass all transmission facilities that connect major generation stations to distribution systems or that there is a bright line between transmission and distribution facilities. APPA interprets these terms as describing the backbone facilities that integrate regional transmission networks.

65. NERC's approach to moving forward with the enforcement of mandatory Reliability Standards is to register the specific entities that NERC will hold accountable for compliance with the Reliability Standards. The registration will identify all entities that are material to the reliability of the Bulk-Power System. NERC maintains its most important role is to mitigate noncompliant behavior regardless of an entity's registration. Further, NERC asserts that all that it and the Commission give up by using the registration approach is, at most, "one penalty, one time" for an entity. That is, if there is an entity that is not registered and NERC later discovers that the entity can have a material impact on the reliability of the Bulk-Power System, NERC has the ability to add the entity, and possibly other entities of a similar class, to the registration list and to direct corrective action by that entity on a going forward basis.[46] Thereafter, of course, the entity would be subject to sanctions. APPA, TANC, AMP-Ohio and NPCC support this approach. While SoCal Edison believes that there can be no single definition of Bulk-Power System, it states that NERC's registry is a good starting point to developing general criteria for what facilities should be subject to the Reliability Standards.

66. AMP-Ohio supports NERC's proposal to include any additional entities or facilities that it believes could have a detrimental effect on the reliability of the bulk electric system on a case-by-case basis over time. Further, Ontario IESO suggests that if the Commission believes that NERC's definition of bulk electric system excludes facilities that should be subject to Reliability Standards for reasons other than preventing cascading outages, the Commission could submit a detailed request through the ERO Reliability Standards development process.

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[46] See Rules of Procedure, § 500.

67. NERC and EEI believe that, in the long run, NERC should be directed to develop, through its Reliability Standards development process, a single process to identify the specific elements of the Bulk-Power System that must comply with Reliability Standards under section 215. According to NERC, the Commission, the states, and all other stakeholders would benefit tremendously from a deliberate dialogue on these matters. NERC asks that the Commission not directly define the outer limits of its jurisdiction under section 215, but requests that the Commission direct NERC to undertake certain activities to reconcile the definitions of bulk electric system and Bulk-Power System and report the results back to the Commission.

68. Similarly, TAPS, APPA, Duke and MidAmerican state that, if there is a problem with NERC's current definition of the bulk electric system, the Commission should require NERC to revisit it using the ANSI process to give "due weight" to NERC's technical expertise. AMP-Ohio, TANC, Georgia Operators and Entergy state that Regional Entities should play a primary role in defining the facilities that are subject to a Reliability Standard because the Regional Entities will have more detailed system knowledge in their regions than NERC or the Commission.

69. The Connecticut Attorney General, the Connecticut DPUC and the New England Conference of Public Utilities Commissioners maintain that NERC's definition of the "bulk electric system" exceeds the Commission's jurisdiction by including generation that is not needed to maintain transmission system reliability and therefore intrudes into state jurisdiction over generation resource adequacy matters and is unlawful. According to Connecticut DPUC, section 215(a)(1) of the FPA excludes from federal regulation (1) facilities that are used in local distribution, (2) facilities and control systems that are not necessary for operating an interconnected electric energy transmission network or part of a network and (3) electric energy from generating facilities not needed to maintain transmission system reliability. Connecticut DPUC maintains that, in contrast, NERC's definition replaces the FPA definition with criteria based on voltage thresholds for transmission facilities and electric energy from generating facilities. According to Connecticut DPUC, NERC's definition does not comply with section 215(a)(1) because it includes facilities and equipment that are neither "necessary" for operation of the transmission network nor "needed" to maintain transmission system reliability. The Connecticut Attorney General and Connecticut DPUC, therefore, urge the Commission to reject this definition.

70. Further, in Connecticut DPUC's view, because the Commission cannot adopt NERC's definition of bulk electric system, it cannot expand the boundaries of its jurisdiction farther than the bulk electric system. It maintains that Congress did not give the Commission jurisdiction to mandate and enforce all Reliability Standards, especially those related to the long-term adequacy of generation resources; therefore, the Commission may not delegate to an ERO authority that it does not have. APPA also

states that the Commission expanded the definition of the bulk electric system so that it may affect facilities subject to state reliability jurisdiction, such as low-voltage transmission systems that affect only the local areas served by those facilities, which do not cause cascading outages, without explaining why it is necessary to federalize reliability responsibility for outages on these facilities.

71. NARUC and New York Commission maintain that the Commission's proposed interpretation of what facilities constitute the Bulk-Power System is inconsistent with section 215 of the FPA. They state that the ability of a facility to "limit or supplement" the transmission system does not automatically mean that a facility is necessary for operating an interconnected transmission system, as required by the FPA, or for maintaining system reliability. According to NARUC, Congress only authorized the Commission to approve Reliability Standards necessary for operating an interconnected electric energy transmission network. Although the NOPR interpretation includes these underlying facilities, it also covers others that are not required to operate an interconnected transmission network.

72. Moreover, NARUC and New York Commission state that the NOPR proposal to define Bulk-Power System as all facilities operating at or above 100 kV exceeds the Commission's jurisdiction. According to NARUC and New York Commission, there is generally a layer of "area" transmission facilities below the "Bulk-Power System" and above distribution facilities that move energy within a service territory and toward load centers. However, NARUC and New York Commission claim that only a small subset of these underlying facilities assists in maintaining the reliability of the Bulk-Power System.

73. Several commenters, including New York Commission, NYSRC, Massachusetts DTE, NPCC, TANC and Ontario IESO, support a functional, impact-based approach to applying Reliability Standards. According to NPCC, neither NERC nor section 215 of the FPA provide a rigorous approach to determining which elements play a role in maintaining reliability of the bulk electric system. These commenters generally state that an impact-based approach would define those elements necessary for Reliable Operation and ensure that compliance and enforcement efforts concentrate on those facilities that materially affect the Reliable Operation of the interconnected Bulk-Power System, while at the same time balancing the costs imposed by mandatory Reliability Standards with the reliability improvement realized on the interconnected Bulk-Power System.

74. Ontario IESO maintains that reliability impact is a process of assessing facilities to determine if, due to recognized contingencies and other test criteria, they represent a significant adverse impact beyond a local area. This assessment will be the basis of a consistent test methodology the ERO must develop to define the facilities included within the overall Bulk-Power System to which a Reliability Standard would apply. Ontario IESO states that the Commission should direct the ERO to take the lead in developing the

impact assessment procedure to provide a consistent and uniform methodology that can be applied by any Regional Entity. Ontario IESO does not support the Commission's proposal to limit case-by-case determinations to underlying transmission systems operating at less than 100 kV.

b. Commission Determination

75. The Commission agrees with commenters that, at least initially, expanding the scope of facilities subject to the Reliability Standards could create uncertainty and might divert resources as the ERO and Regional Entities implement the newly created enforcement and compliance regime. Further, we agree with commenters that unilaterally modifying the definition of the term bulk electric system is not an effective means to achieve our goal. For these reasons, the Commission is not adopting the proposed interpretation contained in the NOPR. Rather, for at least an initial period, the Commission will rely on the NERC definition of bulk electric system[47] and NERC's registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards in the start-up phase of a mandatory Reliability Standard regime.[48]

76. However, we disagree with NERC, APPA and NRECA that there is no intentional distinction between Bulk-Power System and bulk electric system. NRECA states that "[W]here Congress borrows terms of art in which are accumulated the legal tradition and meaning of centuries of practice, it presumably knows and adopts the cluster of ideas that were attached to each borrowed word in the body of learning from which it was taken."[49] In this instance, however, Congress did not borrow the term of art – bulk electric system – but instead chose to create a new term, Bulk-Power System, with a definition that is distinct from the term of art used by industry. In particular, the statutory term does not establish a voltage threshold limit of applicability or configuration as does the NERC definition of bulk electric system. Instead, section 215 of the FPA broadly defines the Bulk-Power System as "facilities and control systems necessary for operating an

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[47] "As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition."

[48] See Section II.C.2., Applicability to Small Entities, infra.

[49] Citing Morissette v. United States, 342 U.S. 246, 263 (1952).

interconnected electric energy transmission network (or any portion thereof) [and] electric energy from generating facilities needed to maintain transmission system reliability." Therefore, the Commission confirms its statements in the NOPR that the Bulk-Power System reaches farther than those facilities that are included in NERC's definition of the bulk electric system.[50]

77. Although we are accepting the NERC definition of bulk electric system and NERC's registration process for now, the Commission remains concerned about the need to address the potential for gaps in coverage of facilities. For example, some current regional definitions of bulk electric system exclude facilities below 230 kV and transmission lines that serve major load centers such as Washington, DC and New York City.[51] The Commission intends to address this matter in a future proceeding. As a first step in enabling the Commission to understand the reach of the Reliability Standards, we direct the ERO, within 90 days of this Final Rule, to provide the Commission with an informational filing that includes a complete set of regional definitions of bulk electric system and any regional documents that identify critical facilities to which the Reliability Standards apply (i.e., facilities below a 100 kV threshold that have been identified by the regions as critical to system reliability).

78. The Commission believes that the above approach satisfies concerns raised by NARUC and New York Commission that the proposal to interpret Bulk-Power System exceeds the Commission's jurisdiction. When the Commission addresses this matter in a future proceeding, it will consider NARUC's and New York Commission's comments regarding the "layer of 'area' transmission."

79. We disagree with commenters claiming that the ERO's definition of bulk electric system is broader than the statutory definition of Bulk-Power System. Connecticut Attorney General, Connecticut DPUC and others argue that the ERO's definition of bulk electric system exceeds the Commission's jurisdiction by including generation that is not needed to maintain transmission system reliability and, therefore, intrudes into state jurisdiction over generation resource adequacy. First, none of the Reliability Standards submitted by the ERO set requirements for resource adequacy. Moreover, commenters have not adequately supported their claim that the "threshold" in the NERC definition of bulk electric system that includes facilities "generally operated at 100 kV or higher" is

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[50] NOPR at P 66. For these same reasons, the Commission rejects the position of those commenters that suggest the statutory definition of Bulk-Power System is more limited than the NERC definition of bulk electric system.

[51] See id. at P 64-65 & n.53-54.

broader than the statutory phrase "electric energy from generation facilities needed to maintain transmission system reliability." As stated explicitly in the NERC definition, this is a "general" threshold and allows leeway to address specific circumstances. On its face, the NERC definition is not overbroad; as applied, it must be interpreted and applied consistent with the statutory language in section 215. Finally, as stated above, we believe that the ERO definition of bulk electric system is narrower than the statutory definition of Bulk-Power System.

2. Applicability to Small Entities

80. The NOPR discussed NERC's plan to, in the future, identify in a particular Reliability Standard limitations on applicability based on electric facility characteristics.[52] The Commission agreed that it is important to examine the impact a particular entity may have on the Bulk-Power System in determining the applicability of a specific Reliability Standard. However, the Commission stated that a "blanket waiver" approach that would exempt entities below a threshold level from compliance with all Reliability Standards would not be appropriate because there may be instances where a small entity's compliance is critical to reliability. The Commission also proposed to direct NERC to develop procedures that permit a joint action agency or similar organization to accept compliance responsibility on behalf of their members.

81. In addition, the Commission solicited comment on whether, despite the existence of a threshold in a particular standard (e.g., generators with a nameplate rating of 20 MW or over), the ERO or a Regional Entity should be permitted to include an otherwise exempt facility, e.g., a 15 MW generator, on a facility-by-facility basis, if it determines that the facility is needed for Bulk-Power System reliability and, if so, what, if any, process the ERO or Regional Entity should provide when making such a determination.

a. Identifying Applicable Small Entities

i. Comments

82. While certain commenters, including EEI, FirstEnergy, SERC, Xcel and Entergy, agree with the Commission that a blanket waiver to exempt small entities from compliance is not appropriate because there may be instances where a small entity's compliance is critical to reliability, APPA, ELCON, Process Electricity Committee, MEAG and South Carolina E&G advocate a blanket waiver.

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[52] Id. P 49-53.

83. APPA notes that none of the entities that contributed to the August 14, 2003 blackout were "small entities" within the meaning of the Regulatory Flexibility Act. APPA and MEAG believe that the Commission's refusal to provide for a blanket waiver to small entities is counterproductive to maintaining reliability, as it will distract compliance staff at NERC and the Regional Entities from identifying and monitoring those with a material impact on reliability, and gives insufficient deference to NERC as the ERO. APPA recommends that the methods and procedures used to identify critical facilities that impact the bulk electric system, regardless of size, should be the subject of a specific set of NERC Reliability Standards. Objective, transparent study criteria and assumptions and due process for affected entities are essential to implement such standards properly. Regional Entities should take advantage of industry expertise in developing and applying the methodology for determining critical facilities.

84. According to MEAG, because the Commission has already determined that it is not bound by the NERC compliance registry,[53] the NOPR's approach leaves small systems, which do not appear on the compliance registry, confused about whether the Reliability Standards apply to them. MEAG asks the Commission to either: (1) grant a temporary, size-based exemption to those small entities that NERC omits from its preliminary compliance registry; or (2) direct NERC to develop and file with the Commission an appropriate size-based exemption for small entities.

85. Several commenters suggest thresholds for applying Reliability Standards. MEAG states that an appropriate threshold level for an exemption, on either an interim or more permanent basis, should at least provide that a LSE or distribution provider should generally be omitted from the compliance registry if it meets the following criteria: (1) its peak load is less than 25 MW and it is not directly connected to the Bulk-Power System; (2) it is not designated as the responsible entity for facilities that are part of a required underfrequency load shedding (UFLS) program designed, installed, and operated for the protection of the Bulk-Power System; or (3) it is not designated as the responsible entity for facilities that are part of a required undervoltage load shedding (UVLS) program designed, installed, and operated for the protection of the Bulk-Power System. STI Capital states that there should be a rebuttable presumption that any generation facility below 50 MW does not pose a threat to reliability. Moreover, more data intensive standards are beyond the ability of small generators.

86. SERC states that exemptions should be granted through the Reliability Standards development process. The ERO and the Regional Entities can provide guidance in that process, and stakeholders have an opportunity to comment on that guidance.

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[53] See ERO Rehearing Order at P 108.

87. A number of commenters, including APPA, NRECA, TANC and TAPS, ask the Commission to adopt NERC's registry guidelines and make clear that issues of applicability will be determined with reference to the NERC compliance registry.[54] TAPS asks the Commission to either approve NERC's registry criteria, or send them back to NERC for further consideration, with mandatory application of Reliability Standards deferred until NERC submits waiver criteria the Commission finds acceptable. According to TAPS, these criteria do not constitute a blanket waiver because they allow NERC and its Regional Entities to go below the general threshold requirements where they determine it is necessary.

88. California Cogeneration states that, while focusing on entities that have a material impact on the Bulk-Power System is a possible approach to applying the Reliability Standards, the proposed rule does not define how "material impact" may be demonstrated. According to California Cogeneration, material impact will vary among Interconnections and it may vary among individual transmission systems. Therefore, California Cogeneration states that the task of defining "material impact" should be remanded by the Commission to NERC for resolution through an inclusive stakeholder process. Until that process is completed, California Cogeneration maintains that the Reliability Standards should not be finally adopted as mandatory and enforceable.

89. Various Georgia cities, which are all member systems of MEAG, state that the Commission should place reasonable limits on the applicability of the proposed Reliability Standards.[55] Each maintains that the Final Rule should include a rebuttable presumption that their distribution system facilities have no material effect on Bulk-Power System reliability unless established otherwise. They suggest that such a rebuttable presumption approach would fairly establish the "reasonable limits on applicability" of the Reliability Standards based on their respective sizes. Similarly, Small Entities Forum supports a rebuttable presumption that any LSE or distribution provider with less than 25 MW of load would be excluded unless a Regional Entity decides that a reason exists to include it.

90. California Cogeneration states that qualifying facilities (QFs) are exempted from section 215 of the FPA. It claims that, after passage of EPAct 2005, the Commission

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[54] NERC has developed a Statement of Compliance Registry Criteria that provides guidance on how NERC will identify organizations that may be candidates for registration. See NERC comments, Attachment B; NERC's February 6, 2007 supplemental filing.

[55] See NOPR at P 1175-76.

modified its regulations to provide that QFs are exempt from all sections of the FPA except sections 205, 206, 220, 221 and 222.[56] Further, California Cogeneration states that the Commission should set limits on whether a Reliability Standard applicable to a generator owner or operator also applies to operators of cogeneration facilities. According to California Cogeneration, the Commission has clearly determined that the impact by a cogenerator on the reliability of the system is limited to its net load on the system.[57] Therefore, California Cogeneration maintains that the Reliability Standards should reflect this limitation.

91. Finally, Small Entities Forum and Entergy state that, despite the existence of a threshold in a particular Reliability Standard, the ERO or a Regional Entity should be permitted to include an otherwise exempt facility, on a facility-by-facility basis, if it determines that the facility is needed for Bulk-Power System reliability. South Carolina E&G states that exceptions to an exemption threshold should sufficiently improve reliability so as to justify the administrative costs and other burdens. However, SMA and MidAmerican oppose allowing the ERO or its designee to include otherwise exempt facilities by making exceptions.

ii. Commission Determination

92. The Commission believes that, at the outset of this new program, it is important to have as much certainty and stability as possible regarding which users, owners and operators of the Bulk-Power System must comply with mandatory and enforceable Reliability Standards. NERC, as the ERO, has developed an approach to accomplish this through its compliance registry process. The Commission has previously found NERC's compliance registry process to be a reasonable means "to ensure that the proper entities are registered and that each knows which Commission-approved Reliability Standard(s) are applicable to it."[58]

93. NERC has provided with its NOPR comments, and in a subsequent supplemental filing, a Statement of Compliance Registry Criteria that describes how NERC will identify organizations that may be candidates for registration and assign them to the compliance registry. For example, NERC plans to register only those distribution

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[56] 18 CFR 292.601(c).

[57] California Cogenration at 6-7, citing California Independent System Operator Corp., 96 FERC ¶ 63,015, at P 7, 24-25 (2001).

[58] ERO Certification Order at P 689.

providers or LSEs that have a peak load of 25 MW or greater and are directly connected to the bulk electric system or are designated as a responsibility entity as part of a required underfrequency load shedding program or a required undervoltage load shedding program. For generators, NERC plans to register individual units of 20 MVA or greater that are directly connected to the bulk electric system, generating plants with an aggregate rating of 75 MVA or greater, any blackstart unit material to a restoration plan, or any generator "regardless of size, that is material to the reliability of the Bulk-Power System."

94. The compliance registry identifies specific categories of users, owners and operators that correlate to the types of entities responsible for performing specific functions described in the NERC Functional Model.[59] These same functional types are also used by the ERO to identify the entities responsible for compliance with a particular Reliability Standard in the Applicability section of a given standard. Thus, each registered entity will be registered under one or more appropriate functional categories, and that registration by function will determine with which Reliability Standards – and Requirements of those Reliability Standards – the entity must comply. In other words, a user, owner or operator of the Bulk-Power System would be required to comply with each Reliability Standard that is applicable to any one of the functional types for which it is registered.

95. We believe that NERC has set reasonable criteria for registration and, thus, we approve the ERO's compliance registry process as an appropriate approach to allow the ERO, Regional Entities and, ultimately, the entities responsible for compliance with mandatory Reliability Standards to know which entities are responsible for initial implementation of and compliance with the new Reliability Standards. Further, based on supplemental comments of APPA, TAPS and NRECA, it appears that there is support among many of the smaller entities for the NERC compliance registry process.[60] Thus, at this juncture, the Commission will rely on the NERC registration process to identify the set of entities that are responsible for compliance with particular Reliability Standards.

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[59] The Statement of Compliance Registry Criteria, as well as the Functional Model, identify, inter alia, the following functions: balancing authority, distribution provider, generator operator, generator owner, load serving entity, planning authority, purchasing-selling entity, transmission owner, transmission operator and transmission service provider. An entity may be registered under one or more of these functions.

[60] See Supplemental Comments of TAPS (February 13, 2007), APPA (February 14, 2007), and NRECA (February 15, 2007).

96. In sum, the ERO will identify those entities that must comply with Reliability Standards in three steps: (1) the ERO will identify and register those entities that fall under its definition of bulk electric system; (2) each registered entity will register in one or more appropriate functional categories and (3) each registered entity will comply with those Reliability Standards applicable to the functional categories in which it is registered.

97. In response to MEAG's concern that the Commission previously determined that it was not bound by the NERC compliance registry process and that there thus was uncertainty, the Commission is modifying the approach proposed in the NOPR and, as noted above, will use the NERC compliance registry to determine those users, owners and operators of the Bulk-Power System that must comply with the Reliability Standards. Each individual Reliability Standard will then identify the set of users, owners and operators of the Bulk-Power System that must comply with that standard. While the Commission may take prospective action against an entity that was not previously identified as a user, owner or operator through the NERC registration process once it has been added to the registry, the Commission will not assess penalties against an entity that has not previously been put on notice, through the NERC registration process, that it must comply with particular Reliability Standards. Under this process, if there is an entity that is not registered and NERC later discovers that the entity should have been subject to the Reliability Standards, NERC has the ability to add the entity, and possibly other entities of a similar class, to the registration list and to direct corrective action by that entity on a going-forward basis.[61] The Commission believes that this should prevent an entity from being subject to a penalty for violating a Reliability Standard without prior notice that it must comply with that Reliability Standard.

98. As stated in the NOPR, NERC has indicated that in the future it may add to a Reliability Standard limitations on applicability based on electric facility characteristics such as generator nameplate ratings.[62] While the NOPR explored this approach as a means of addressing concerns over applicability to smaller entities, the Commission believes that, until the ERO submits a Reliability Standard with such a limitation to the Commission, the NERC compliance registry process is the preferred method of determining the applicability of Reliability Standards on an entity-by-entity basis.

99. A number of municipalities and generation owners ask that the Commission review their particular circumstances and provide an individual waiver from compliance

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[61] See NERC Rules of Procedure, § 500.

[62] NOPR at P 49.

with the mandatory Reliability Standards. In light of our above discussion, the Commission declines to determine whether any individual municipality, generation owner or other entity is subject to a specific Reliability Standard. Rather, NERC and the Regional Entities should determine such applicability in the first instance through the registration process.

100. We agree with California Cogeneration that the Commission's regulations currently exempt most QFs from specific provisions of the FPA including section 215.[63] The Commission is concerned, however, whether it is appropriate to grant QFs a complete exemption from compliance with Reliability Standards that apply to other generator owners and operators. It is not clear to the Commission that for reliability purposes there is a meaningful distinction between QF and non-QF generators. While such an issue is beyond the scope of the current rulemaking, we note that, concurrent with the issuance of this Final Rule, the Commission is issuing a notice of proposed rulemaking that proposes to amend the Commission's regulation that exempts most QFs from section 215 of the FPA.

101. Finally, the Commission agrees that, despite the existence of a voltage or demand threshold for a particular Reliability Standard, the ERO or Regional Entity should be permitted to include an otherwise exempt facility on a facility-by-facility basis if it determines that the facility is needed for Bulk-Power System reliability.[64] However, we note that an entity that disagrees with NERC's determination to place it in the compliance registry may submit a challenge in writing to NERC and, if still not satisfied, may lodge an appeal with the Commission.[65] Therefore, a small entity may appeal to the Commission if it believes it should not be required to comply with the Reliability Standards.

b. Ability to Accept Compliance on Behalf of Members

i. Comments

102. APPA, NERC, ELCON, APPA, TAPS and Small Entities Forum support the Commission's proposal to allow a joint action agency, generation and transmission

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[63] 18 CFR 292.601(c).

[64] Demand resources deemed critical by the ERO to Bulk- Power System reliability should be included in the registry

[65] See ERO Certification Order at P 679.

(G&T) cooperative, or other entities to accept responsibility for compliance with Reliability Standards on behalf of their members and also may divide the responsibilities for compliance with its members. APPA states that this should also be extended to RTOs, vertically integrated utilities, and other wholesale power suppliers that perform substantial reliability functions on behalf of their full requirements wholesale customers, including public power distribution systems and other entities that currently fulfill reliability functions for customers. APPA, TAPS and Small Entities Forum state that the procedure should allow for this responsibility to be assigned on a standard-by-standard basis.

103. In response to the Commission's proposal to direct NERC to develop procedures that permit a joint action agency or similar organization to accept compliance responsibility on behalf of its members, NERC proposes the following procedure, and has updated its entity registration criteria to reflect these changes.[66] NERC states that each "central" organization should be able to register as being responsible for compliance for itself and collectively on behalf of its members. Each member within a central organization may separately register to be accountable for a particular reliability function defined by the standards. Under NERC's proposal, if the central organization and a member organization cannot agree that one organization or the other is responsible, or if the parties agree that the responsibilities for a particular reliability function should be split, then NERC would register both entities concurrently. NERC and the Regional Entities will then have the authority to find either organization or both accountable for a violation of a Reliability Standard, based on the facts of the case and circumstances surrounding the violation.

104. AMP-Ohio states that the Commission should clarify that a joint action agency should not be required to assume compliance responsibility for its members for all reliability-related functions. It asks that the Commission allow flexibility in how joint action agencies and their members allocate responsibility. TAPS states that joint action agencies should be allowed to achieve compliance with a standard at the joint action agency level rather than to simply stand in the shoes of their individual members. TAPS states that this is necessary to ensure comparable treatment for small entities in relation to large utilities. Where a joint action agency accepts compliance responsibility and a standard is susceptible to joint action agency-level assessment of compliance, the Commission should ask NERC to adopt such assessment to avoid an adverse impact on competition.

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[66] See NERC comments at 53-55; NERC supplemental filing, Statement of Compliance Registry Criteria (Revision 3) at 9.

105. MEAG finds the Commission's proposal with regard to joint action agencies problematic. MEAG asserts that the proxy approach is not a universal approach to small municipal systems. For example, this option would be fundamentally inconsistent with MEAG's role as a G&T cooperative serving its member systems because MEAG has no authority to plan, physically operate, modify, maintain or test the local distribution system facilities of the member systems. Second, MEAG states that if it were to assume the role of the proxy compliance agent for the member systems and incur a fine for the failure of a few to comply with the requirements of the Reliability Standards, then the imposition of fines would lead to a rate increase to all systems, an improper and unjustifiable cost shifts among the member systems. Third, if MEAG were to err in its role as a proxy compliance agent for the member systems, MEAG could be sued and there is nothing that presently limits its liability or provides indemnification to MEAG in that circumstance. Moreover, MEAG states that the compliance-by-proxy option will not mitigate the economic impact on many small distribution-only entities because many are not members of joint action agencies.

106. Several commenters, including EEI, PJM and FirstEnergy do not oppose the Commission's proposal to allow organizations to accept compliance responsibility on behalf of members so long as compliance responsibility is clear and responsible entities are held accountable. FirstEnergy and PJM state that some Reliability Standards appear to have duplicate accountability in different organizational entities, which could create confusion and complicate operational authority and thus undermine the transmission operator chain of command required to respond quickly and decisively to system operational events. Further, FirstEnergy states that some Reliability Standards obligate an entity to perform reliability functions when that entity may not be able to perform its reliability function due to other legal constraints. FirstEnergy states that one effective approach to resolving this problem would be to establish a "priority" of control between entities. FirstEnergy adds that entities that are subject to legal control by ISOs and RTOs should be afforded a "safe harbor" under the Reliability Standards if, during an emergency, they perform as directed by the ISO or RTO, whether under the ISO/RTO's OATT or under the ISO/RTO's authority as reliability coordinator.

ii. Commission Determination

107. The Commission directs the ERO to file procedures which permit (but do not require) an organization, such as a joint action agency, G&T cooperative or similar organization to accept compliance responsibility on behalf of its members. The Commission believes that NERC's proposed procedures described above are reasonable,

and directs the ERO to submit a filing within 60 days.[67] In allowing a joint action agency, G&T cooperative or similar organization to accept compliance responsibility on behalf of its members, our intent is not to change existing contracts, agreements or other understandings as to who is responsible for a particular function under a Reliability Standard. Further, we clarify that there should not be overlaps in responsibility nor should there be any gaps.

108. In response to concerns raised by AMP-Ohio and MEAG, the Commission clarifies that an organization is not required to assume compliance responsibility for its members for any reliability-related functions and all Reliability Standards. Moreover, under NERC's proposal, a member within a central organization may separately register to be accountable for a particular reliability function so the responsibility for reliability functions can be split. The Commission believes that this will provide flexibility and will not require an entity to assume responsibility where it is not possible to do so. We also believe that NERC's proposal adequately addresses TAPS' concern that a joint action agency should be allowed to achieve compliance at the joint action agency level. Specifically, the Statement of Compliance Registry Criteria provides that a central organization can register for all functions that it performs itself and, in addition, may register on behalf of one or more of its members for functions for which the member would otherwise be required to register.[68]

109. NERC, in developing its procedures relating to joint action agencies and similar organizations, should consider the concerns of EEI, PJM and FirstEnergy regarding the need for ensuring clear lines of responsibility. While we agree with FirstEnergy in the abstract that an entity implementing the legal directives of an ISO or RTO should not be penalized for following an ISO or RTO directive during an emergency, we will not mandate a safe harbor provision for such circumstances. Rather, these and other matters should be considered by the ERO or a Regional Entity when deciding the appropriate enforcement action in response to an event where a violation of a Reliability Standard may have occurred.

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[67] Section 39.10(b) of the Commission's regulations, 18 CFR 39.10(b), provides that the Commission, upon its own motion or upon complaint, may propose a change to an ERO or Regional Entity Rule.

[68] See NERC Supplemental Filing, Statement of Compliance Registry Criteria (Revision 3), at 8-9.

3. Definition of User of the Bulk-Power System

110. In the NOPR, the Commission did not propose a generic definition of the term "User of the Bulk-Power System." Rather, the Commission stated that it would determine applicability on a standard-by-standard basis.[69] The NOPR explained that § 40.1(b) of the proposed regulations would require the ERO to identify in each proposed Reliability Standard the specific subset of users, owners and operators of the Bulk-Power System to which the proposed Reliability Standard would apply, which is NERC's current practice. The NOPR also stated that entities concerned that a particular proposed Reliability Standard would apply more broadly than the statute allows may raise their concerns in the context of the specific Reliability Standard.

a. Comments

111. APPA disagrees with a standard-by-standard approach to defining the term "user of the Bulk-Power System" because it would go beyond those facilities that are required to maintain the reliability of the high-voltage, bulk transmission system and intrude into state and local matters and trespass on state jurisdiction. According to APPA, the Reliability Standards themselves state their applicability in terms of the Functional Model, which does not include size limitations in the various functional categories included in it. Without some type of outer limit on the "user of the Bulk-Power System" definition, all such entities regardless of size or their impact on the Bulk-Power System, must review every proposed Reliability Standard and protest every time they have a "concern in the context of the specific Reliability Standard." They must also retain permanent staff or consultants to evaluate new or revised standards. Rather, APPA, as does TANC, urges the Commission to support NERC's registry criteria to make the definition of "users of the Bulk-Power System" co-extensive with the users on NERC's compliance registry.

112. SMA is concerned that not specifically defining who is a "user of the Bulk-Power System" will not provide timely notice to entities that are not the parties historically responsible for implementing NERC's prior reliability standards. SMA states that NERC must identify the subset of users that must comply with any given Reliability Standard at a sufficiently early stage for all such affected parties to have an opportunity to raise objections to the sweep or content of the Reliability Standard while approval of that Reliability Standard is under consideration. SMA also argues that NERC's Rules of Procedure must require actual notice to an entity before it is placed on the compliance registry.

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[69] NOPR at P 43.

113. Southwest TDUs urges the Commission to clarify that "users" are entities that have more involvement with it than merely receiving power from it. Since these Reliability Standards will become mandatory and violation of any of them can be accompanied by economically significant penalties, Southwest TDUs urges the Commission to make every effort to be specific about what constitutes a "user."

114. California Cogeneration states that the Commission has not provided any detail as to how a "user" will be identified. The NOPR and the NERC Reliability Standards it proposes to adopt rely on the broad entities identified in the NERC Functional Model. According to California Cogeneration, using only the NERC Functional Model provides no detail and no differentiation in the applicability of each Reliability Standard. While a single definition of "user" may not be appropriate, California Cogeneration maintains that using only the fixed designations within the NERC Functional Model does not provide sufficient specificity. The terms "Generator Owner" and "Generation Operator" also must be qualified so that they only apply to generation operations that utilize the grid and exclude generation output dedicated to on-site consumption.

b. Commission Determination

115. The Commission's determination above to rely on the ERO's compliance registry process to identify users, owners and operators of the Bulk-Power System that must comply with new mandatory and enforceable Reliability Standards should resolve the concerns expressed by APPA, SMA and others regarding the need to identify and provide timely notice to those users of the Bulk-Power System that are expected to comply with specific Reliability Standards.

116. While we recognize the desire of some commenters for a concise, generic definition of "user of the Bulk-Power System," we are concerned that any attempt to define the term at this time will either be overly broad so as not to provide any helpful guidance or overly narrow so as to exclude entities that should be covered. The Commission believes that it has employed a reasonable approach by endorsing NERC's compliance registry process and requiring that each Reliability Standard identify the subset of users, owners and operators to whom that particular Reliability Standard applies.

4. Use of the NERC Functional Model

117. NERC has developed a "Functional Model"[35] that defines the set of functions that must be performed to ensure the reliability of the Bulk-Power System. The Functional Model identifies 14 functions and the name of a corresponding entity responsible for fulfilling each function.

118. In the NOPR, the Commission proposed to use the NERC Functional Model to identify the applicable entities to which each Reliability Standard applies.[70] The Commission explained that focusing on the functions an entity performs to identify what entities are users, owners and operators of the Bulk-Power System, and thus what entities are subject to the Reliability Standards, provides a useful level of detail and appears to be more practical than simply identifying an applicable entity as a user, owner or operator. In addition, the NOPR recognized concerns that the Functional Model may contain ambiguities and proposed to require NERC to specifically address these concerns.

119. The Commission proposed that, because the Functional Model is linked to applicability of the Reliability Standards, the ERO should submit for Commission approval any future modifications to the Functional Model that may affect the applicability of the Reliability Standards.

a. Filing the Functional Model with the Commission

i. Comments

120. NERC states that, while it believes that the Functional Model should be filed for informational purposes only, it will submit any changes to the Functional Model to the Commission for approval as requested. While NERC states that the Functional Model will not function as a legally binding document like a Reliability Standard, the Commission's approval of this reference document and of any changes to the Functional Model will support the development of high quality, enforceable and technically sufficient standards.

121. Several commenters, including NERC, EEI, APPA, MidAmerican, National Grid and MRO state that the Functional Model is not part of the Reliability Standards and should be filed with the Commission for informational purposes only. They generally state that the Functional Model is not a definitive guide to the "users, owners and operators" of the Bulk-Power System and should not be used to establish obligations under section 215, which should be established within each individual Commission-approved Reliability Standard.

122. Northeast Utilities is concerned with the Commission's proposal to use the NERC Functional Model to identify applicable entities. It believes that the Functional Model can be useful in drafting standards, but it is not a substitute for having clear definitions of the entities responsible for compliance with the requirements for each Reliability

[70] NOPR at P 46-48.

Standard within a region. The entities responsible for meeting the standard may vary depending on how the Bulk-Power System is operated. FirstEnergy states that the Functional Model may not clearly or correctly identify the entities to which a Reliability Standard applies and maintains that the Functional Model should be applied only where all of the affected stakeholders agree on the final classifications of each Registered Entity's roles and responsibilities.

123. In contrast, TANC and ISO-NE state that the Commission should require that any future modification to the Functional Model that could affect the categories of entities that must comply with a particular Reliability Standard be approved by the Commission because the Functional Model is so closely interrelated with the applicability of each Reliability Standard.

124. APPA, TAPS and ReliabilityFirst maintain that any modification to the NERC Functional Model should be reviewed and approved through the Reliability Standards development process. According to ReliabilityFirst, any change to the Functional Model is essentially an amendment to the Reliability Standard made outside the ERO process. TANC asserts that a Reliability Standard will only be complete if the definitions of the Functional Model are developed through the Reliability Standards development process just like any Reliability Standard. APPA would allow NERC to issue interpretations of the Functional Model, but these interpretations should then be confirmed through NERC procedures.

125. TAPS cautions that, because the Functional Model includes no express size limitations, NERC and the Commission can rely on the Functional Model to define applicability of standards only if such limits are imposed by NERC's compliance registry criteria and its bulk electric system definition. The Small Entities Forum is concerned because smaller entities have historically performed only a subset of functions. For example, it states that some joint action agencies invest in transmission facilities that are operated by others, but that these joint action agencies, under the Functional Model, would have to verify that these facilities, operated by others, are being operated and maintained according to applicable Reliability Standards.

126. Several commenters argue that the Functional Model contains a number of ambiguities. MISO argues that the definition of the term planning coordinator is circular and may lead to one subset of the transmission system having multiple Planning Coordinators. MISO recommends that the Commission direct NERC to survey the industry to identify the planning roles that actually exist in the industry and clarify the role of the wide-area Planning Coordinator. MISO and Wisconsin Electric note that the proposed Reliability Standards do not specify who fulfills the Interchange Authority or Planning Authority roles, and there is no common industry understanding of those roles. Finally, California Cogeneration states that the definition of LSE is too inclusive and

should be modified to exclude entities providing service only to loads on-site or pursuant to private contract.

ii. Commission Determination

127. The Commission accepts the characterization offered by numerous commenters that the Functional Model is an evolving guidance document that is not intended to convey firm rights and responsibilities. Further, we agree that the applicability section of a particular Reliability Standard should be the ultimate determinant of applicability of each Reliability Standard. In light of this, we will not require the ERO to submit revisions of the Functional Model for Commission approval. While some commenters suggest that revisions be filed for informational purposes, we see little value in mandating such a filing.[71]

128. With regard to the comments of TAPS, APPA, TANC and others on whether revisions to the Functional Model should be made through the ERO's Reliability Standards development process, we do not believe that it is necessary under the statute, since applicability will be determined at this time by the specifications of the Reliability Standards and the compliance registry process. Thus, we leave to the discretion of the ERO the appropriate means of allowing stakeholder input when revising the Functional Model. To the extent that changes in the Functional Model require revised specification in the Reliability Standards, the latter will be addressed in the Reliability Standards development process.

129. While TAPS and Small Entities Forum raise concerns regarding the absence of size limitations in the Functional Model and potential negative impacts on small entities, we believe that these concerns are addressed above in our decision regarding use of the NERC compliance registry process. MISO, Wisconsin Electric and others comment on the need to clarify certain ambiguities in the Functional Model. Given that the Functional Model is an evolving guidance document, the ERO can address such concerns as it updates and revises the Functional Model.

b. Responsibility for Functions within the Functional Model

130. In the NOPR, the Commission explained that, in the context of an ISO or RTO or any organization that pools resources, decision-making and implementation are

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[71] We note that NERC has available on its website, www.nerc.com, the current version of the Functional Model. We expect NERC to continue to do so in the future.

performed by separate groups.[72] The ISO or RTO typically makes decisions for the transmission operator and, to a lesser extent, the generation operator, while actual implementation is performed by either local transmission control centers or independent generation control centers. The NOPR proposed that "all control centers and organizations that are necessary for the actual implementation of the decisions or are needed for operation and maintenance made by the ISO or RTO or the pooled resource organizations are part of the transmission or generation operator function in the Functional Model."[73]

i. Comments

131. A number of commenters raise concerns or seek clarification regarding the relationship between the Functional Model and existing agreements that set forth the responsibility of various entities, particularly in the context of ISO and RTO operations. MISO requests the Commission to clarify that nothing in the Functional Model requires one entity to be responsible for all of the tasks within a function, regardless of who actually performs the task. In those ISOs and RTOs where balancing authorities have retained and have never delegated to the RTO certain tasks that fall within the balancing authority function, NERC's Functional Model should only require one responsible entity per task rather than one responsible entity for all of the tasks within that function. MISO submits that the NERC Functional Model should not play a prescriptive role by assigning responsibility for a given task where such an assignment would be inconsistent with a Commission-approved regional transmission agreement, RTO tariff, or reliability plan filed with NERC, all of which specify the entity performing each task.

132. PJM states that, while the Commission proposed to assign responsibility for reliable operations to multiple entities within an ISO or RTO to address its concern that decision making and implementation are performed by separate organizations, it does not believe that increasing the number of organizations responsible for a given function for the same facilities within the bulk electric system has been shown to be an effective or appropriate solution to the concerns cited. PJM states that NERC employs processes that successfully manage the delegation of operational tasks while maintaining single entity accountability for the reliable performance of those operational tasks.

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[72] NOPR at P 236.

[73] Id. at P 237. Although discussed in the context of the communication (COM) Reliability Standards, the NOPR suggested that the proposal would apply to other Reliability Standards. Because of the nature of the comments on the issue and its relationship to the Functional Model, we discuss the matter here.

133. ATC states that Regional Entities should be given the flexibility to allow some "tasks" within a "function" to be performed by one entity, with the remaining tasks to be performed by another entity. According to ATC, this would provide entities – particularly smaller ones – with the flexibility to transfer their responsibility for a reliability task or function to another registered entity that can perform the work more effectively. Further, ATC maintains, Regional Entities should ensure that entities be given accountability only for systems, facilities and functions over which they actually have control.

134. NPCC states that requirements applicable to local control centers should be distinct from requirements applicable to transmission and generation operators under the NERC Functional Model. NPCC submits that there is a difference between being assigned to do a task and being responsible for the completion of that task. An organization that registers with NERC as performing a function is considered a responsible entity and must ensure that all tasks are performed. While an organization may delegate a task to another organization, it may not delegate its responsibility for ensuring that the task is accomplished.

135. According to Ontario IESO, the Commission's proposal is inconsistent with the NERC Functional Model, which envisions one responsible entity for each reliability function. In contrast, the Commission's proposal would split the same function between different organizations such as an ISO and a local control center. PJM claims that, under the Functional Model, single entity registration is a foundational cornerstone for ensuring clear responsibility and accountability for compliance with Reliability Standards.

136. Ontario IESO asserts that the Commission's proposal is also problematic because in the event of a violation it will be difficult to determine who violated the Reliability Standard - the entity making the decision or the entity implementing the decision. Ontario IESO argues that, although the NERC Functional Model is not foolproof, it avoids complications by distinguishing between responsibility and performance. The ISO is the responsible entity and it delegates some of its tasks to local control centers, but retains the overall responsibility.

137. According to Ontario IESO, NERC has recognized that, although organizations such as local control centers play an important role in reliability, they are not responsible entities. Therefore, NERC has made such organizations subject to compliance audits and placed other requirements on them. In addition, NERC intends that the regional reliability plans will document the relationships between the local control centers and the entity that delegates its responsibility to such centers. The current framework has a mechanism for accommodating reliability considerations for organizations such as local control centers. In this regard, NERC's ongoing formal certification of reliability coordinator, balancing authority and transmission provider will be useful in determining

any delegation of tasks to local control centers that must take place for a clear demarcation of responsibilities. Ontario IESO advises that, since NERC has not finished this task, the Commission should defer its decision in this regard.

138. ISO/RTO Council states that the Commission should not use the term "local control center" because it will cause confusion. The NERC Functional Model does not define the term and it means different things in different regions. For example, in MISO, which consists of 25 balancing areas, "local control center" is an equivalent term for balancing area although this was probably not the Commission's intent in the NOPR. Therefore, ISO/RTO Council argues that the Reliability Standards should be limited to defining the tasks in the context of users, owners and operators of the Bulk-Power System; any delegation of responsibilities to a local control center or any other organization should take place in the context of ISO/RTO governing documents, operating agreements, tariffs and other arrangements with transmission owners and related stakeholders. This approach, according to ISO/RTO Council will address the Commission's concerns with respect to local control centers without preempting possible regional solutions.

139. FirstEnergy believes that, while independent authority to operate the transmission system should be self-evident, in RTO environments with local control centers, the tasks performed by each entity do not encompass the entirety of tasks performed by the transmission operator under the Functional Model. It suggests that NERC should revise the Functional Model to create certification and registration requirements for local control authorities within RTOs that perform real-time operations of the transmission system. FirstEnergy states that a revised NERC Functional Model should recognize local control centers that take some direction from RTOs yet maintain authority to act independently to carry-out functional tasks that require real-time operation of the system. According to FirstEnergy, the required registration and certification of such entities would clearly indicate the need for operational personnel in these control rooms to be NERC-certified. It concludes that at a minimum, a NERC certification for the tasks performed by such local control center individuals would be an enhancement over the current situation.

140. ISO-NE argues that the Commission should not mandate that the tasks performed by local control centers be included in the definition of transmission operator because to do so would be to suggest that a local control center has independent autonomy in operating the Bulk Power System which would conflict with the "one set of hands on the wheel" philosophy. It explains that local control center personnel in New England implement tasks delegated to them by ISO-NE for operation of designated transmission facilities. Therefore, ISO-NE submits, the scope of the Reliability Standard need not be expanded.

ii. Commission Determination

141. In response to the many concerns of commenters, the Commission clarifies that it did not intend to change existing contracts, impose new organizational structures or otherwise affect existing agreements that set forth the responsibilities of various entities. Rather, its intent was to allow enough granularity in the definitions so that the appropriate user, owner or operator of the Bulk-Power System would be identified for each Reliability Standard. We agree also with MISO's statement that nothing in the Functional Model requires one entity to be responsible for all of the tasks within a function, regardless of who actually performs the task.

142. The Commission's concern is that, particularly in the ISO, RTO and pooled resource context, there should be neither unintended redundancy nor gaps for responsibilities within a function. In particular, the Commission is concerned that such "gaps" could occur in the context of several Reliability Standards addressing matters related to activities other than directing or implementing real-time operations.[74] For example, the involvement of a transmission operator at an ISO or RTO with respect to the requirements related to telecommunications facilities (COM-001-1) from the local control room and blackstart restoration plans (EOP-005-0) may be minimal. Because the operators at local control centers actually perform all or most of the tasks contemplated under various Reliability Standards, we are concerned that there may be unintended gaps in such responsibilities if the existing contracts between the ISO or RTO and owners of the facilities do not address such responsibilities.

143. In response to MISO, we did not intend to be prescriptive in assigning tasks to specific entities. The intent was to allow flexibility in identifying the actual user, owner or operator of the Bulk-Power System that would be responsible for complying with the Requirements in the Reliability Standards. One approach could be that the RTO, ISO or other pooled resource registers as the transmission operator pursuant to the NERC compliance registry process and, while retaining ultimate responsibility, assigns specific

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[74] See, e.g., CIP-001 – Sabotage Reporting; COM-001 – Telecommunications; EOP-003 –Load Shedding Plans; EOP-004 - Disturbance Reporting; EOP-005 – System Restoration Plans; EOP-008 – Plans for Loss of Control Center Functionality; PRC-001 – System Protection Coordination; PRC-007 – Assessing Consistency with Entity Underfrequency Load Shedding Programs with Regional Reliability Organizations UFLS Program Requirements; PRC-009 – Analysis and Documentation of Underfrequency Load Shedding Performance Following an Underfrequency Event; PRC-010 – Technical Assessment of the Design and Effectiveness of Undervoltage Load Shedding Program; PRC-022 – UFLS Program Performance; and TOP-006 – Monitoring System Conditions.

tasks to be performed by what are sometimes known as local control centers or other relevant organizations. Alternatively, the local control center operators could register together with the RTO, ISO or pooled resources as transmission operators clearly delineating their specific responsibilities with regard to the Requirements of particular Reliability Standards. Such joint registration must assure that there is no overlap between the decisionmaking and implementation functions, i.e., that there are not two sets of hands on the wheel. Again, our intent is to ensure that there is neither redundancy nor gap in responsibility for compliance with the Requirements of a Reliability Standard, while allowing entities flexibility to determine how best to accomplish this goal.

144. Consistent with our above explanation, we agree with NPCC that there is a difference between being assigned to perform a task and being responsible for completing the task. The organization that registers with NERC to perform a function will be the responsible entity and, while it may delegate the performance of that task to another, it may not delegate its responsibility for ensuring the task is completed.

145. Accordingly, the Commission directs that the ERO, in registering RTOs, ISOs and pooled resource organizations (or, indeed in registering any entity), assure that there is clarity in the assigning responsibility and that there are no gaps or unnecessary redundancies with regard to the entity or entities responsible for compliance with the Requirements of each relevant Reliability Standard. Accordingly, although the Commission is not requiring NERC to amend the Functional Model, we believe our concerns can be addressed by having the ERO, through its compliance registry process, ensure that each user, owner and operator of the Bulk-Power System is registered for each Requirement in the Reliability Standards that relate to transmission owners to assure there are no gaps in coverage of the type discussed here.

5. Regional Reliability Organizations

146. The NOPR stated that 28 proposed Reliability Standards would apply, in whole or in part, to a regional reliability organization.[75] Further, many of the proposed Reliability Standards that have compliance measures refer to the regional reliability organization as a compliance monitor. The Commission stated in the NOPR that it was not persuaded that a regional reliability organization's compliance with a Reliability Standard can be enforced as proposed by NERC because it does not appear that a regional reliability organization is a user, owner or operator of the Bulk-Power System.

[75] NOPR at P 54.

147. The Commission proposed to approve and direct modification of five Reliability Standards that apply partially to regional reliability organizations. For the other Reliability Standards that apply to regional reliability organizations, the Commission proposed, as an interim measure, to direct the ERO to use its authority pursuant to § 39.2(d) of our regulations to require users, owners and operators to provide to the regional reliability organizations information related to data gathering, data maintenance, reliability assessments and other process-type functions. The NOPR explained that this approach is necessary to ensure that there will be no gap during the transition from the current voluntary system to a mandatory system in which Reliability Standards are enforced by the ERO and Regional Entities. The NOPR proposed that, in the long run, Regional Entities should be made responsible, through delegation from the ERO, for the functions currently performed by the regional reliability organizations. To implement this, the Commission proposed the modification of delegation agreements to require the Regional Entities to assume responsibility for noncompliance. In addition, the Commission proposed that the Reliability Standards should be modified to apply to the users, owners and operators of the Bulk-Power System that are responsible for providing information. The Commission proposed to require that any Reliability Standard that references a regional reliability organization as a compliance monitor be modified to refer to the ERO as the compliance monitor.

148. The Commission stated that, while it is important that the existing regional reliability organizations continue to fulfill their current roles during the transition to a regime where Reliability Standards are mandatory and enforceable, the Commission does not understand why, once the transition is complete, a regional reliability organization should play a role separate from a Regional Entity whose function and responsibility is explicitly recognized by section 215 of the FPA. The Commission sought comment on whether there is any need to maintain separate roles for regional reliability organizations with regard to establishing and enforcing Reliability Standards under section 215.

a. Comments

149. NERC believes it can remove references to regional reliability organizations and Regional Entities from the Reliability Standards, with the exception of retaining the Regional Entities as the compliance enforcement authorities. However, NERC and California PUC request that the Commission reconsider its proposal to direct that the ERO be listed as the compliance monitor in each Reliability Standard. California PUC states that naming NERC as the compliance monitor deprives the Regional Entities of their enforcement role under section 215. NERC believes it will be clearer, and consistent with the delegation agreements, to designate the Regional Entity as the compliance monitor in almost all Reliability Standards. According to NERC, this would also be helpful to distinguish those few Reliability Standards that are monitored directly by NERC.

150. ReliabilityFirst, TANC and SoCal Edison agree with the Commission that regional reliability organizations and Regional Entities cannot be users, owners or operators of the Bulk-Power System and should not be subject to compliance with Reliability Standards. TANC states that Reliability Standards that reference a regional reliability organization need to be revised to reference a user, owner or operator of the Bulk-Power System in order to comply with the statute.

151. EEI agrees with the Commission's proposal to direct the ERO to require users, owners and operators to provide the information related to data gathering, data maintenance, reliability assessments and other process-type functions that previously have applied to regional reliability organizations. EEI also agrees that, in the long run, it is appropriate to make the Regional Entities responsible through delegation from the ERO for various functions now performed by regional reliability organizations. In doing so, and during the transition in particular, EEI maintains that it is important that functions now performed by the regional councils, such as planning, be continued.

152. A number of commenters discuss the possible ongoing role for a regional reliability organization. For example, Ontario IESO, NPCC and National Grid state that the Commission should recognize that the regional reliability organizations will continue to play a role in areas including developing regional reliability plans and adequacy requirements that are outside the jurisdiction of the ERO. NPCC states that enforcement of adequacy requirements should continue to reside with the regional reliability organization. National Grid states that the role of regional reliability organizations can be preserved in a variety of ways, including requiring obligations currently imposed upon regional reliability organizations to be included in the regional delegation agreements.

153. NPCC further maintains that regional reliability organizations should continue to function as regional sites for technical expertise for enhanced reliability requirements through adopting regionally-specific criteria. According to NPCC, eliminating the ability for regions to develop and propose new criteria that enhance system reliability would edge the system closer towards the lowest common denominator rather than striving towards operational excellence. Further, Ontario IESO and NPCC state that regional reliability organizations should be allowed to perform certain functions for their members, such as system operator workshops, forums for coordination of operations and planning and operational readiness conference calls.

154. Massachusetts DTE comments that a regional reliability organization should be allowed to propose a Reliability Standard that may exceed or enhance the proposed mandatory Reliability Standards to ensure regional reliability. It further states that any regional reliability criteria proposed by a regional reliability organization should be vetted through a regional stakeholder process and then specifically adopted by the appropriate state regulatory authorities.

155. Although MRO does not oppose regional reliability organizations, with regard to establishing and enforcing mandatory Reliability Standards, MRO, Constellation and Xcel state that there is no need to maintain a separate role for regional reliability organizations. Because Regional Entities may perform non-reliability functions, Constellation states that maintaining regional reliability organizations will result in unnecessary cost. While Constellation has no objection to the Regional Entities performing non-statutory functions, it states that the Commission should not allow Regional Entities to impose Reliability Standards developed by the regional reliability organizations as mandatory Reliability Standards.

156. MidAmerican believes that it will be important to separate the compliance functions of the Regional Entities from non-compliance functions currently assigned to the regional reliability organizations. It states that this can be done by: (1) separating these functions internally in the Regional Entities; (2) separating these functions in different organizations; or (3) separating these functions by assigning non-compliance related functions currently assigned to the regional reliability organizations to other users, owners and operators. This will minimize conflicts between the Regional Entity core compliance function and the non-compliance regional reliability organization requirements.

b. Commission Determination

157. The Commission adopts the NOPR proposal to eliminate references to the regional reliability organization as a responsible entity in the Reliability Standards. We conclude that this approach is appropriate because, as explained in the NOPR, such entities are not users, owners or operators of the Bulk-Power System. NERC indicates that it can remove such references, except that the Regional Entity should be identified as the compliance monitor where appropriate. While the Commission originally proposed that the ERO should be designated as the compliance monitor, we agree with NERC's approach and believe that identifying the Regional Entity as the compliance monitor will provide useful specificity as to which entity will be immediately tasked with monitoring compliance with a particular Reliability Standard. However, as we stated in Order No. 672, the ERO retains responsibility to ensure that a Regional Entity implements its enforcement program in a consistent manner, and to periodically review the Regional Entity's enforcement activities.[76]

[76] Order No. 672 at P 654.

158. For those Reliability Standards that identify the regional reliability organization as the sole applicable entity, and that relate to data gathering, data maintenance, reliability assessments and other process-type functions,[77] the NOPR proposed:

> as an interim measure . . . to direct the ERO to use its authority pursuant to § 39.2(d) of our regulations to require users, owners and operators to provide to the regional reliability organizations the information related to data gathering, data maintenance, reliability assessments and other "process"-type functions. We believe that this approach is necessary to ensure that there will be no "gap" during the transition from the current voluntary reliability model to a mandatory system in which Reliability Standards are enforced by the ERO and Regional Entities. In the long run, we propose to make the Regional Entities responsible, through delegation by the ERO, for the functions currently performed by the regional reliability organizations. As part of this change, the delegation agreements to the Regional Entities should be modified to bind the Regional Entities to assume these duties and responsibility for noncompliance. In addition, the Reliability Standards should be modified to apply through the Functional Model, to the users, owners and operators of the Bulk-Power System that are responsible for providing information.[78]

159. We continue to believe that this is a reasonable interim measure, and note that EEI and others support this approach. To ensure that the ERO properly and timely addresses this matter, we direct the ERO to submit an informational filing within 90 days of the Final Rule that describes its plan and schedule for developing both an interim and long-term resolution based upon the above direction.

160. In response to the Commission's inquiry in the NOPR, commenters identify a number of possible continuing roles for regional reliability organizations. Such activities are beyond the scope of this proceeding. Clearly, any such role must be limited to non-statutory functions. Some commenters suggest that regional reliability organizations may have a role in developing voluntary criteria. Regional reliability organizations should not develop voluntary criteria that address the same or similar matters as mandatory and

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[77] EOP-007, MOD-011, MOD-013, MOD-014, MOD-015, MOD-024, MOD-025, PRC-002, PRC-003, PRC-006, PRC-012, PRC-013, PRC-014, PRC-020, TPL-005 and TPL-006.

[78] NOPR at P 57 (footnotes omitted).

enforceable Reliability Standards, because that is the responsibility of the Regional Entities.[79]

D. Mandatory Reliability Standards

1. Legal Standard for Approval of Reliability Standards

161. The NOPR explained that section 215(d)(2) of the FPA states that the Commission may approve a Reliability Standard if it determines that it is just, reasonable, not unduly discriminatory or preferential and in the public interest. Further, Order No. 672 laid out a series of factors it would consider when assessing whether to approve or remand a Reliability Standard.[80]

162. In response to NERC's suggestion that a proposed Reliability Standard developed through its open and inclusive process is assured to be "just, reasonable, and not unduly discriminatory or preferential," the NOPR explained that:

> While an open and transparent process certainly is extremely important to the overall success of implementing section 215 of the FPA, an evaluation of any proposed Reliability Standard must focus primarily on matters of substance rather than procedure. We will, therefore, review each Reliability Standard in addition to the process through which it was approved by NERC to ensure that the Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest.[[81]]

163. Further, with regard to NERC's "benchmarks" for evaluating a proposed Reliability Standard,[82] the Commission explained that it would not be constrained by such benchmarks in approving or remanding a proposed Reliability Standard. Rather,

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[79] See ERO Certification Order at P 281.

[80] Order No. 672 at P 262, 321-37.

[81] NOPR at P 74.

[82] Id. at P 9-12. The benchmarks are: applicability, purpose, performance requirements, measurability, technical basis in engineering and operations, completeness, consequences for noncompliance, clear language, practicality, and consistent terminology.

Order No. 672 identified factors that the Commission will consider when determining whether a proposed Reliability Standard satisfies the statutory requirements.

a. Comments

164. NERC states that 83 of the Reliability Standards are "just, reasonable, not unduly discriminatory or preferential, and in the public interest," and should therefore be approved and made effective as mandatory Reliability Standards. NERC believes that, by following NERC's Reliability Standards development process, a Reliability Standard should meet the requirement that a standard be "just, reasonable, not unduly discriminatory or preferential." Further, NERC asserts that, by filing with the Commission the written record of development for each Reliability Standard, NERC has given the Commission strong evidence that those 83 Reliability Standards are just, reasonable, and not unduly discriminatory or preferential.

165. NERC states that the requirement that a Reliability Standard be "in the public interest" provides the Commission with broad discretion to review and approve a Reliability Standard. According to NERC, implicit in the "public interest" test is that a Reliability Standard is technically sound and ensures an adequate level of reliability, and that the Reliability Standards provides a comprehensive and complete set of technically sound requirements that establish an acceptable threshold of performance necessary to ensure reliability of the Bulk-Power System. NERC states that it believes that approving those 83 Reliability Standards as enforceable as NERC begins operating as the ERO meets this objective and will achieve an adequate level of reliability as required by law. NERC asserts that adopting fewer of the Reliability Standards would both create potential reliability risks and communicate that some aspects of reliability are not viewed as important enough to be the subject of mandatory and enforceable Reliability Standards under the FPA.

166. FirstEnergy states that each proposed standard should be reviewed against the following criteria: (1) clarity; (2) technical means to comply; (3) practicability; (4) consistency and (5) costs.

b. Commission Determination

167. The Commission agrees with NERC that an open and transparent process is important in implementing section 215 of the FPA and developing proposed mandatory Reliability Standards. However, in Order No. 672, the Commission rejected the presumption that a proposed Reliability Standard developed through an ANSI-certified

process automatically satisfies the statutory standard of review.[83] The Commission reiterates that simply because a proposed Reliability Standard has been developed through an adequate process does not mean that it is adequate as a substantive matter in protecting reliability. We will, therefore, review each Reliability Standard to ensure that the Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest, giving due weight to the ERO.

168. In response to FirstEnergy, the Commission has already laid out the factors against which to review a Reliability Standard, as well as other considerations.[84] The Commission has no need to revisit this issue.

2. Commission Options When Acting on a Reliability Standard

169. In the NOPR, the Commission proposed that, for this rulemaking, it would take one of four actions with regard to each proposed Reliability Standard: (1) approve; (2) approve as mandatory and enforceable; and direct modification pursuant to section 215(d)(5); (3) request additional information; or (4) remand. In fact, the NOPR did not propose to remand any proposed Reliability Standard.[85]

170. With regard to the second category, the Commission explained that it would take two separate and distinct actions under the statute. First, pursuant to section 215(d)(2) of the FPA, the Commission would approve a proposed Reliability Standard, which would be mandatory and enforceable upon the effective date of the Final Rule. Second, the Commission would direct NERC to submit a modification of the Reliability Standard to address specific issues or concerns identified by the Commission pursuant to section 215(d)(5) of the FPA.

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[83] Order No. 672 at P 338.

[84] Id. at P 262, 321-37. (A proposed Reliability Standard must: (1) provide for the Reliable Operation of Bulk-Power System facilities; (2) be designed to achieve a specified reliability goal and must contain a technically sound means to achieve this goal; (3) be clear and unambiguous regarding what is required and who is required to comply; (4) clearly state the possible consequences for violating the proposed Reliability Standard; (5) include a clear criterion or measure of whether an entity is in compliance with a proposed Reliability Standard; (6) achieve its reliability goal effectively and efficiently; (7) not reflect the "lowest common denominator.")

[85] NOPR at P 78-82.

171. With regard to the third category, "request additional information," the NOPR explained that some Reliability Standards do not contain sufficient information to enable the Commission to propose a disposition. For those Reliability Standards, the Commission identified the needed information, and proposed not to approve or remand these Reliability Standards until all the relevant information is received. As an example, the NOPR explained that many of the fill-in-the-blank standards would not be approved or remanded until the Commission had received all the necessary information.

a. Comments

172. Most commenters generally support the Commission's proposal to have four courses of action it may take on a Reliability Standard. However, Xcel has concerns about the legality of approving many of the proposed Reliability Standards as mandatory but, at the same time, ordering the ERO to make specific modifications to them. According to Xcel, section 215(d) does not expressly create this "approve but modify" option. To the contrary, section 215(d)(4) suggests that the Commission should remand to the ERO a standard that it disapproves "in whole or in part."

173. While many commenters support the Commission proposal to approve certain Reliability Standards as mandatory and enforceable; and direct NERC to modify them pursuant to section 215(d)(5), they are concerned that the Commission's directives to modify certain Reliability Standards are too prescriptive.[86] They contend that, in prescribing particular requirements, metrics, or specific language to be used, the Commission is setting the Reliability Standard outside the open Reliability Standards development process and not giving due weight to the ERO under section 215 of the FPA. NRECA, for example, argues there is a major distinction between (a) requiring a Reliability Standard to address a specific matter and (b) requiring (as opposed to suggesting) a specific Reliability Standard or requiring a reliability matter to be addressed in a specific way. These commenters ask that the Final Rule state that a directive to improve a Reliability Standards be in the form of an objective to be achieved or concern or deficiency to be resolved within the Reliability Standard, rather than a particular requirement, metric, or specific language to be used.

174. Many commenters request that the Commission require that changes to any Reliability Standard be made through NERC's Reliability Standard development

[86] See, e.g., NERC, Entergy, EEI, APPA, National Grid, NRECA, TAPS, ISO-NE and Duke.

procedure.[87] NERC states that there are areas where the Commission proposes a specific directive on a particular Reliability Standard that is well beyond the bounds of current utility practice. According to NERC, these recommendations are often derived from the Staff Preliminary Assessment or are based on a limited number of comments to that assessment. NERC anticipates that the issue of concern with respect to these Reliability Standards will be addressed, but the results may be somewhat different than anticipated by the Commission. Similarly, EEI and Progress state that NERC should not pre-determine the outcome of the Reliability Standard development procedure in response to the Commission's guidance. Ontario IESO states that the Commission should allow its detailed input on the proposed Reliability Standards to be considered through Reliability Standards development process.

175. According to EEI, NERC should be permitted to provide, if the Commission's guidance for modification of a proposed Reliability Standard is not adopted in the Reliability Standard development procedure, an explanation for that outcome when it submits the modified standard to the Commission for approval. Constellation asks the Commission to clarify that, if the ERO Reliability Standards development process does not result in a Reliability Standard that includes the Commission's proposed modifications, the existing Reliability Standard would remain in effect until such time as NERC proposes and the Commission approves a different Reliability Standard (approved through the Reliability Standards development process).

176. Manitoba and Northwest Requirements Utilities disagree with the Commission's proposal to approve certain Reliability Standards and, separately, direct NERC to make modifications. Some commenters, such as California PUC, Northwest Requirements Utilities and SMA state that the users, owners and operators of the Bulk-Power System should not be expected to comply with Reliability Standards that are not finalized or need modification. Northwest Requirements Utilities contends that complete and clear Reliability Standards and requirements are necessary to fair enforcement, particularly if monetary sanctions may apply. Manitoba and California PUC state that approving Reliability Standards that still require modification would lead to differing interpretations of the Reliability Standards and confusion.

177. CEA asserts that the proposed directives to modify certain Reliability Standards, while not remands, reflect engagement in the standards-setting process that may interfere with the ERO's ability to effectively function as an international body. For example, Manitoba states that the Commission's proposed modifications without industry input

[87] See, e.g., NERC, EEI, ELCON, CEA, NYSRC, TVA, LPPC, NPCC, Ontario IESO, Constellation, Progress and Dynegy.

may unintentionally place Manitoba in a position where it must recommend that the Government of Manitoba disallow the Commission's prescribed modifications to several NERC Reliability Standards, thus creating discrepancies between Reliability Standards across North America.

178. FirstEnergy agrees with the Commission's rejection of the concept of "conditional approval" in favor of approve but modify to ensure that enforceable standards are in place. However, it asks that the Commission consider waiving, or at least substantially reducing, penalties for violations of some enforceable, but yet-to-be-completed or modified Reliability Standards because compliance with such Reliability Standards may prove difficult to determine. FirstEnergy therefore suggests that the Commission exercise due discretion in enforcing affected Reliability Standards, especially where the Commission itself has found that a standard is incomplete or ambiguous. International Transmission agrees that in instances where the Commission has proposed material changes to a Reliability Standard and its associated measurements, risk factors and Levels of Non-Compliance, it may be appropriate for the ERO to exercise enforcement discretion on a case-by-case basis.

179. SoCal Edison is concerned that entities may not have an opportunity to (1) review the Reliability Standards that are adopted in the Final Rule and (2) make any necessary changes in their operating or planning practices in order to incorporate differences between the NOPR and the Final Rule. SoCal Edison recommends the Commission specifically state the "effective date" for compliance with each Reliability Standard in its Final Rule. SoCal Edison is concerned because some standards have a proposed NERC "effective" date after the Final Rule.

180. Northern Indiana states it is concerned how a June 2007 effective date will impact electric system reliability during the critical summer peak demand period, particularly given the many problems with the standards that have been identified. Northern Indiana believes the Commission's current actions may, in the near term, create a lower probability of success in achieving the Commission's stated objectives. Northern Indiana suggests that the traditional summer peak season is not a good time to implement broad changes in electric system operations, procedures and protocols.

181. NRECA states it is concerned by the NOPR's efforts to establish specific one and three year time frames for resolution of various matters. It states that the Commission is authorized to comment on priorities and suggest timing, it must allow NERC to follow its ANSI-certified Reliability Standards development process.

182. NERC requests that the Commission provide a directive in the Final Rule requiring NERC to address both the Commission's concerns with the existing Reliability Standards and all comments filed in this rulemaking proceeding suggesting specific

improvements to the Reliability Standards. NERC states that if the Commission acts on the views expressed on a specific Reliability Standards by an individual commenter in this rulemaking, it may encourage others to avoid participating in the NERC process and instead wait until a proposed new or modified Reliability Standard reaches the Commission approval stage to express their views on the standards. NERC states that no commenter should be entitled to have its comments on a specific Reliability Standard resolved by the Commission in this rulemaking proceeding.

183. NERC maintains that referring all comments to the NERC Reliability Standards development process for resolution is consistent with NERC's obligation to facilitate an open stakeholder process for the development of Reliability Standards. NERC asserts that it gives fair consideration to all comments and objections on a proposed new or revised Reliability Standard and such comments are either resolved to the satisfaction of the commenter, or reasons are stated as to why the commenter's recommendation should not be adopted.

b. Commission Determination

184. The Commission affirms the four possible courses of action that it will take with regard to each proposed Reliability Standard: (1) approve; (2) approve as mandatory and enforceable; and direct modification pursuant to section 215(d)(5); (3) request additional information; or (4) remand. Each course of action is justified and has a sound basis in the statute. Xcel questions the legality of the second option above, which it incorrectly equates to "conditional acceptance." Rather, as explained in the NOPR,[88] the Commission is taking two independent actions, both authorized by the statute. First, we are exercising our authority, contained in section 215(d)(2) of the FPA, to approve a proposed Reliability Standard. Second, we are directing the ERO to submit a modification of the Reliability Standard to address specific issues or concerns identified by the Commission, pursuant to section 215(d)(5) of the FPA.[89] Accordingly, we reject Xcel's contention and adopt the NOPR proposal on this matter.

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[88] See NOPR at P 79-80.

[89] 16 USC 824o(d)(5) ("[t]he Commission . . . may order the Electric Reliability Organization to submit to the Commission a proposed Reliability Standard or modification to a Reliability Standard that addresses a specific matter if the Commission considers such a new or modified Reliability Standard appropriate to carry out this section.").

185. With regard to the many commenters that raise concerns about the prescriptive nature of the Commission's proposed modifications, the Commission agrees that a direction for modification should not be so overly prescriptive as to preclude the consideration of viable alternatives in the ERO's Reliability Standards development process. However, in identifying a specific matter to be addressed in a modification to a Reliability Standard, it is important that the Commission provide sufficient guidance so that the ERO has an understanding of the Commission's concerns and an appropriate, but not necessarily exclusive, outcome to address those concerns. Without such direction and guidance, a Commission proposal to modify a Reliability Standard might be so vague that the ERO would not know how to adequately respond.

186. Thus, in some instances, while we provide specific details regarding the Commission's expectations, we intend by doing so to provide useful guidance to assist in the Reliability Standards development process, not to impede it.[90] We find that this is consistent with statutory language that authorizes the Commission to order the ERO to submit a modification "that addresses a specific matter" if the Commission considers it appropriate to carry out section 215 of the FPA.[91] In the Final Rule, we have considered commenters' concerns and, where a directive for modification appears to be determinative of the outcome, the Commission provides flexibility by directing the ERO to address the underlying issue through the Reliability Standards development process without mandating a specific change to the Reliability Standard. Further, the Commission clarifies that, where the Final Rule identifies a concern and offers a specific approach to address the concern, we will consider an equivalent alternative approach provided that the ERO demonstrates that the alternative will address the Commission's underlying concern or goal as efficiently and effectively as the Commission's proposal.

187. Consistent with section 215 of the FPA and our regulations, any modification to a Reliability Standard, including a modification that addresses a Commission directive, must be developed and fully vetted through NERC's Reliability Standard development process. The Commission's directives are not intended to usurp or supplant the Reliability Standard development procedure. Further, this allows the ERO to take into consideration the international nature of Reliability Standards and incorporate any

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[90] Moreover, in the NOPR, the Commission first discussed in detail its substantive concerns regarding a particular proposed Reliability Standard and, to provide greater clarity regarding the Commission proposal, then summarized the proposed findings and modifications. It appears that such summaries of broader and fuller discussions led to misunderstandings of the NOPR proposals.

[91] 16 USC 824o(d)(5).

modifications requested by our counterparts in Canada and Mexico. Until the Commission approves NERC's proposed modification to a Reliability Standard, the preexisting Reliability Standard will remain in effect.

188. We agree with NERC's suggestion that the Commission should direct NERC to address NOPR comments suggesting specific new improvements to the Reliability Standards, and we do so here. We believe that this approach will allow for a full vetting of new suggestions raised by commenters for the first time in the comments on the NOPR and will encourage interested entities to participate in the ERO Reliability Standards development process and not wait to express their views until a proposed new or modified Reliability Standard is filed with the Commission. As noted throughout the standard-by-standard analysis that follows, various commenters provide specific suggestions to improve or otherwise modify a Reliability Standard that address issues not raised in the NOPR. In such circumstances, the Commission directs the ERO to consider such comments as it modifies the Reliability Standards during the three-year review cycle contemplated by NERC's Work Plan through the ERO Reliability Standards development process. The Commission, however, does not direct any outcome other than that the comments receive consideration.

189. We disagree with commenters, such as Xcel, suggesting that the Commission should not approve Reliability Standards that we require NERC to modify. The Commission is only approving those Reliability Standards that it has determined to be just, reasonable, not unduly discriminatory or preferential, and in the public interest. As discussed more fully in the discussion of the individual Reliability Standards, we have determined that each approved Reliability Standard is sufficiently clear and independently enforceable. Because we believe that these Reliability Standards are enforceable as written, the Commission will not exempt them from enforcement.

190. The Commission disagrees with Northern Indiana that the Reliability Standards should not be implemented in summer of 2007.[92] Most or all users, owners and operators of the Bulk-Power System have participated in NERC's voluntary reliability regime for years and are familiar with the proposed Reliability Standards. Others have had notice of the Reliability Standards since they were filed by NERC in April 2006. We are not persuaded that making Reliability Standards enforceable, most of which were being complied with on a voluntary basis, will require broad changes in electric system operations, procedures and protocols. Therefore, we do not see any reason to further delay implementation of the mandatory Reliability Standards.

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[92] See discussion below regarding the Trial Period, section II.D.4.

191. In response to SoCal Edison, Reliability Standards will become effective the latter of the effective date of this Final Rule or the ERO's proposed NERC effective date. The Commission disagrees with SoCal Edison that users, owners and operators of the Bulk-Power System will not have an opportunity to review the Reliability Standards that are adopted in the Final Rule and incorporate differences between the NOPR and the Final Rule into their operating practices. The Reliability Standards approved in this Final Rule are approved as proposed by the ERO. No changes will be made immediately based on the Commission's direction to modify those Reliability Standards. Any modifications will be developed through the ERO's Reliability Standards development process and should have a proposed effective date that will take into account any time needed for users, owners and operators of the Bulk-Power System to incorporate the necessary changes. Therefore, there is no need for any entity to make any changes based on differences between the NOPR and the Final Rule.

192. NRECA's assertion that the Commission should not establish timelines to resolve matters is a collateral attack on Order No. 672. In that order, the Commission adopted its regulations to provide that the Commission, when ordering the ERO to submit to the Commission a proposed Reliability Standard or proposed modification to a Reliability Standard that addresses a specific matter, may order a deadline by which the ERO must submit a proposed or modified Reliability Standard.[93]

3. Prioritizing Modifications to Reliability Standards

193. As discussed above, the Commission proposed to approve certain Reliability Standards and, as a separate action, proposed to direct the ERO to modify many of the same Reliability Standards pursuant to section 215(d)(5) of the FPA. In the NOPR, the Commission recognized that it is not reasonable to expect the modification of such a substantial number of Reliability Standards in a short period of time. Thus, the NOPR provided guidance on the prioritization of needed modifications.[94]

194. The NOPR proposed that NERC first focus its resources on modifying those Reliability Standards that have the largest impact on near-term Bulk-Power System reliability, including many of the proposed modifications that reflect Blackout Report recommendations. Further, the Commission identified a group of Reliability Standards that it believes should be given the highest priority by the ERO based on the above

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[93] See 18 CFR 39.5(g).

[94] NOPR at P 85-87.

guidance.[95] The NOPR explained that the list is not meant to be exclusive or inflexible and solicited ERO and commenter input. The NOPR proposed that NERC address the "high priority" modifications within one year of the effective date of the Final Rule.

195. In addition, the NOPR proposed that the ERO promptly address certain proposed modifications that are not necessarily identified as "high priority" but may be addressed in a relatively short time frame because the proposed modifications are relatively minor or "administrative" in nature. The NOPR further proposed that the ERO develop a detailed, comprehensive Work Plan to address all of the modifications that are directed pursuant to a Final Rule. The Work Plan would take a staggered approach and complete all the proposed modifications within either two or three years from the effective date of the Final Rule.

196. As noted above, on December 1, 2006, NERC submitted its Work Plan as an informational filing. According to the Work Plan, NERC will revise the existing Reliability Standards to incorporate improvements. A total of 31 different projects will be completed over a three year period.[96] Some of the projects address revising a single Reliability Standard. The largest project includes revising 19 Reliability Standards focusing on related topics. NERC asserts that grouping the Reliability Standards in this manner will be the most efficient use of the resources and will allow consistency in requirements on related standards. NERC states that the Work Plan incorporates modifications that were proposed in the NOPR, but it will modify its Work Plan to align it with the modifications the Commission orders in the Final Rule. In addition, the Work Plan will remain dynamic as new Reliability Standards are proposed and priorities evolve. The Work Plan will be updated on an annual basis, and more frequently if needed.

197. According to the Work Plan, NERC will periodically report progress and revisions to the Work Plan and timetable to the Commission. NERC's intent is to provide accountability for the revision and development of Reliability Standards, while recognizing it is impossible to have a fixed schedule when working in a consensus-driven process addressing complex technical matters.

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[95] Id. at Appendix D (High Priority List).

[96] Some projects relate to new Reliability Standards that are not before the Commission in the instant rulemaking.

a. Comments

198. NERC states that it is pleased that the Commission did not propose specific deadlines in the NOPR for completing the directives to improve the Reliability Standards. NERC requests that the Commission not state specific delivery dates, because developing consensus Reliability Standards on complex technical matters within fixed time frames may not be realistic in all cases. NERC states that it will report the reasons for any delays in the schedule and will work to ensure that no unnecessary delays occur due to lack of attention or effort.

199. NERC expresses concern that the Commission suggests in the NOPR that it may direct some early modifications to the Reliability Standards that appear to provide quick results.[97] According to NERC, because of the procedural requirements of the Reliability Standards development process, this would delay work that is more important. NERC states that it can make such changes quickly for a particular Reliability Standard if there are no other changes to that standard. However, NERC's Work Plan contemplates that almost every Reliability Standard is to be upgraded; modifying each standard in multiple steps would add significant delay.

200. APPA similarly cautions the Commission that the industry does not have unlimited ability to simultaneously reevaluate the Reliability Standards, prepare for NERC's and the Regional Entities' compliance monitoring and enforcement programs, and actually plan and operate their utility systems on a reliable basis. According to APPA, NERC should promptly address the administrative elements of those Reliability Standards that are now at best incomplete, with missing Compliance Measures, Levels of Non-Compliance and Violation Risk Factors. NERC must also deal with the regional fill-in-the-blank standards and criteria that have not yet been submitted to either NERC or to the Commission for review and approval.

201. International Transmission states that the Commission should not direct NERC to make changes to the Reliability Standards within a specific time frame because this would circumvent the Reliability Standard development process. It asks the Commission to instruct the ERO to initiate the Reliability Standards development process in a time frame that would likely result in their presentation to the Commission by a desired date, acknowledging that a revised Reliability Standard may not reach industry consensus and thus not meet the Commission's desired time frame. Further, International Transmission believes that the priority of a Reliability Standard for subsequent modification should be based on the standard's "Violation Risk Factor." Reliability Standards that have the

[97] NOPR at P 86.

greatest impact on bulk electric system reliability should be addressed first. All high risk requirements should be addressed in the 2007 Work Plan. International Transmission states the addition of Measures and Levels of Non-Compliance is neither minor nor administrative in nature, although designated by the Commission as such and called for an accelerated time period for their addition.

202. MRO recommends that the Commission place a greater emphasis on directing NERC to develop clear and measurable Requirements. If the Requirements are not clear and measurable, the Measures and Levels of Non-Compliance will be fundamentally flawed. MRO also states that there are numerous Requirements that are now part of the Reliability Standards that came from elements of the former NERC Operating Manual that were never intended as Requirements. It believes that this, in part, has created certain difficulties that have resulted in a lack of Measures or Levels of Non-Compliance in the Reliability Standards. MRO provides examples of such difficulties in its comments regarding specific Reliability Standards. MRO suggests grouping each Requirement with its associated Measure and Level of Non-Compliance thus making it clear to the user, owner or operator as to which Requirements, Measures and Levels of Non-Compliance are related thereby reducing confusion.

203. APPA and Alcoa state that the Commission did not give sufficient time for comments on NERC's submitted Work Plan. APPA notes that the Work Plan will have to be revised following issuance of the Final Rule.

b. Commission Determination

204. Given the concerns raised by commenters, the Commission will not adopt the NOPR's proposal to direct some early modifications to the Reliability Standards. We agree with NERC that modifying each Reliability Standard first to address administrative concerns, then sending it back to the Reliability Standards development process to address any modifications directed by the Commission or requested by stakeholders, might lead to an unacceptable delay.

205. While the Commission agrees with International Transmission that a good starting point for prioritizing modifications to a Reliability Standard could be based on the Reliability Standard's "Violation Risk Factor," the Commission will not mandate that the ERO do so. The ERO should take into account the views of its stakeholders, including the concerns raised in this proceeding by APPA, International Transmission and MRO, in revising its Work Plan following issuance of this Final Rule.

206. In Order No. 890, the Commission directed public utilities, working through NERC, to modify the ATC-related Reliability Standards within 270 days of publication of Order No. 890 in the Federal Register.[98] Our action there affects approximately nine MOD Reliability Standards and one FAC Reliability Standard that are before us in this proceeding. The ERO must submit its revised Work Plan within 90 days of the effective date of the Reliability Standards approved in this order as an informational filing to: (1) reflect modification directives contained in the Final Rule; (2) include the timeline for completion of ATC-related Reliability Standards as ordered in Order No. 890 and (3) account for the views of its stakeholders, including those raised in this proceeding.

207. The Commission disagrees with NERC that we should not set specific delivery dates. A Work Plan with specific target dates will provide a valuable tool and incentive to timely address the modifications directed in this Final Rule. We note that the ERO previously prepared and submitted to the Commission for informational purposes one iteration of such a Work Plan that identifies target dates for the modification of Reliability Standards. Accordingly, we direct the ERO to submit as an informational filing, within 90 days of the effective date of this Final Rule, a Work Plan that identifies a plan for addressing the modifications to the Reliability Standards directed by the Commission in this Final Rule and a schedule with delivery dates for completing such modifications. The ERO should make every effort to meet such delivery dates. However, we understand that there may be certain cases in which the ERO is not able to meet a Commission's deadline. In those instances, the ERO must inform the Commission of its inability to meet the specified delivery date and explain why it will not meet the deadline and when it expects to complete its work.

4. Trial Period

208. NERC and some commenters to the Staff Preliminary Assessment recommended that the Commission establish a "trial period" during which time the ERO would determine, but not collect, monetary penalties. In the NOPR, the Commission expressed concern that a trial period that commences with the effective date of mandatory and enforceable Reliability Standards may interfere with their being made effective by summer 2007. Thus, the NOPR did not propose a trial period.[99]

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[98] Preventing Undue Discrimination and Preference in Transmission Service, Order No. 890, 72 FR 12266(March 15, 2007), FERC Stats. & Regs. ¶ 31,241 (2007) at P 223.

[99] Id. at P 92-93.

209. However, the Commission recognized that there are entities that have not historically participated in the pre-existing voluntary reliability system (including some relatively small entities) that may not be familiar with what is required for compliance with the proposed mandatory Reliability Standards. For such entities, the NOPR proposed that the ERO and Regional Entities use their discretion in imposing penalties on such entities for the first six months the Reliability Standards are in effect. However, the Commission, the ERO and the Regional Entities would still retain the authority to impose penalties on such entities if warranted by the circumstances.

a. Comments

210. Most commenters request that the Commission reconsider the proposal to reject a trial period during which the Reliability Standards are mandatory and enforceable but during which penalties would not be assessed for violating a Reliability Standard.[100] EEI, for example, notes that the compliance enforcement program and the delegation agreements have not yet been approved by the Commission and there may be a short time between their approval and the projected start date for enforcing the Reliability Standards. Therefore, commenters generally state that a trial period is appropriate to ensure that the compliance monitoring and enforcement processes work as intended and that entities have time to implement new processes, such as required data systems; after June 2007, commenters generally state that NERC and the Regional Entities would be able to require remedial actions where there is an immediate actual or potential risk to reliable interconnected operations. Further, some state that a trial period would allow NERC to resolve issues with unfinished standards or ambiguous standards for which the Commission has directed improvements. If the Commission rejects a six-month trial period, several entities, such as EEI, PG&E, Xcel and NYSRC, request that the Commission extend NERC's discretionary enforcement to all entities, not just those new to the Reliability Standards.

211. NPCC essentially agrees with the Commission that there should be no trial period, but if the definition of Bulk-Power System is substantially altered to draw in a broad range of entities that have not traditionally been subject to pre-existing reliability standards, a transition period is appropriate to bring them into compliance. Where a Reliability Standard has missing or incomplete compliance measures, ATC states that the Commission should make these standards mandatory to avoid gaps, but not assess monetary penalties for non-compliance. ATC agrees with the Commission that the new mandatory reliability regime should be operational by June 2007, noting that it has been

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[100] See, e.g., EEI, APPA, TAPS, EPSA, CAISO, Bonneville, California PUC, Cleveland, Otter Tail, Northwest Requirements Utilities, TVA and SMA.

over three years since the August 2003 Blackout and over a year since EPAct 2005 was enacted.

212. Several entities state that the Commission's proposal to allow the ERO and Regional Entities discretion in setting penalties does not go far enough, even if it is applied to all users, owners and operators of the Bulk-Power System. For example, SERC maintains that its proposed delegation agreement and the NERC Compliance Monitoring and Enforcement Program may not allow discretion in imposing penalties.

213. NERC states that it understands and supports the importance the Commission places on the ERO having the ability to impose a financial penalty if a Bulk-Power System user, owner or operator violates a mandatory Reliability Standard that is in effect, especially for egregious behavior. However, NERC continues to maintain that a validation period for the compliance process and the calculation of penalties is important and proposes a modified approach to that taken by the Commission. NERC asks the Commission to authorize NERC and the Regional Entities to exercise discretion to calculate financial penalties, but not collect them in the case of most violations through December 31, 2007. At the same time it asks the Commission to specify that in a situation in which an entity violates a clear and well-understood Reliability Standard that causes a significant disturbance on the Bulk-Power System, or in the face of other aggravating circumstances such as repeated or intentional violations, the ERO and the Regional Entities would have the authority and responsibility to hold the offending entity fully accountable for the violation, by the assessment of financial penalties.

214. NERC states that this alternative approach is supported by the newness of the compliance enforcement program, the Sanctions Guidelines and the penalty matrix, and the Violation Risk Factors, which have not been approved by the Commission. Further, NERC claims that initiating operations under mandatory Reliability Standards with the collection of penalties as the rule rather than the exception may increase the risk of numerous legal challenges occurring in the early stages of implementing mandatory Reliability Standards, whereas NERC would expect a rapid decline in such challenges after its proposed validation period. In a reply comment, Xcel supports NERC's proposed approach.

215. If the Commission rejects NERC's proposed modified approach, NERC asks that it and the Regional Entities be given broad discretion in setting penalties during this time period and that this discretion not be limited to small entities or those who are new to Reliability Standards. Avista/Puget also urges the Commission, the ERO and the Regional Entities to exercise enforcement discretion more broadly than proposed in the NOPR. Penalties should be waived for an initial period in several situations, including where a Reliability Standard is applied based on new or different interpretations.

216. Some commenters request that the Commission grant a longer trial period in certain cases. For instance, TANC believes that for smaller entities the Commission should, at a minimum, adopt a trial period of at least one year to provide adequate time to evaluate and comply with the new mandatory Reliability Standards. Bonneville and NPCC suggest that, for Reliability Standards that have an annual reporting requirement, the compliance cycle should start on June 2007 so that a Reliability Standard that relies on data reporting back into the prior year should have an initial compliance measurement date of June 2008. AMP-Ohio states that the Commission's proposal does not go far enough and suggests a "ramp-up" period for entities that are new to standards, through and including the entity's first compliance audit or, if the Commission rejects this proposal, the Commission should extend the trial period from six to twelve months. Reliant also advocates a phase-in of penalties over six to twelve months, with an increasing scale of penalties over time.

217. Portland General and Tacoma request that the Commission institute a one-year trial period to allow the industry time to finalize the language of the mandatory Reliability Standards and to allow users, owners and operators time to adapt to the final language. For any Reliability Standard that requires modification, Tacoma requests that the Commission provide a six-month trial period beyond the date when the Reliability Standard is completed. Bonneville asks that the Commission extend the trial period for Reliability Standards that have missing or ambiguous measures or severity levels until those issues are resolved. National Grid states that enforcement discretion should not be limited in scope or duration and should be extended to any situation in which a Reliability Standard is applied in a novel manner, including when a Reliability Standard is interpreted for the first time.

218. PG&E asserts that NERC and the Regional Entities should have discretion in imposing fines for violations of Reliability Standards during a transition period. Where an entity shows a good faith effort to comply with a new or changed Reliability Standard promptly and thoroughly, NERC and/or the Regional Entity should be permitted to consider those efforts in assessing fines. PG&E suggests a transition period of three to six months. Without such discretion, entities may be pressured to implement Reliability Standards hastily and inadequately. PG&E also notes that some entities in WECC have voluntarily participated in WECC's enforcement program. The new regime entails procedural and substantive changes. Entities that have complied voluntarily should not be penalized by denying them an opportunity to adjust.

219. WECC states that it continues to believe that a trial period of more than six months is appropriate, but it is not requesting that the Commission revisit its decision on this issue. WECC asks that Regional Entities have somewhat greater flexibility in monitoring and enforcing compliance during the initial period of implementation. According to WECC, the Commission should recognize that, in the early stages of

implementation, penalties should be reserved for clear situations where Registered Entities are refusing to comply. Unreasonably harsh enforcement in the early stages of implementation may damage the current level of reliability by diverting resources away from developing solutions in order to avoid fines and support litigation. This flexibility should continue beyond six months after the effective date, if necessary, for those Reliability Standards requiring modification, until such modifications have become effective.

220. According to WECC, it is extremely important that United States, Canadian and Mexican authorities enforce their respective standards within WECC in a way that avoids conflicting obligations. WECC thus suggests that the Commission grant WECC substantial discretion to focus on education and facilitation of compliance with NERC Reliability Standards while it seeks to promote consistent enforcement internationally.

b. Commission Determination

221. The Commission adopts its proposal not to institute a formal trial period. As we explained in the NOPR, a trial period is inconsistent with mandatory and enforceable Reliability Standards taking effect in a timely manner.[101] The Commission's overriding concern is the reliability of the Bulk-Power System, and mandatory and enforceable Reliability Standards becoming effective in a timely manner are essential to ensuring the reliability of the Bulk-Power System. Accordingly, the Commission will not adopt a formal trial period.

222. The Commission is, however, also cognizant of commenters' concerns. In the NOPR, the Commission proposed that the ERO and Regional Entities use their enforcement discretion in imposing penalties on entities that historically had not participated in the pre-existing voluntary reliability regime, although authority to impose a penalty on such an entity would be retained "if warranted by the circumstances."[102] In light of commenters' concerns, including the fact that there are new aspects to the Reliability Standards and the proposed compliance program that will apply to all users, owners and operators of the Bulk-Power System, the Commission directs the ERO and Regional Entities to focus their resources on the most serious violations during an initial period through December 31, 2007. This thoughtful use of enforcement discretion should apply to all users, owners and operators of the Bulk-Power System, and not just those new to the program as originally proposed in the NOPR. This approach will allow the

[101] NOPR at P 92.

[102] Id. at P 93.

ERO, Regional Entities and other entities time to ensure that the compliance monitoring and enforcement processes work as intended and that all entities have time to implement new processes.

223. By directing the ERO and Regional Entities to focus their resources on the most serious violations through the end of 2007, the ERO and Regional Entities will have the discretion necessary to assess penalties for such violations, while also having discretion to calculate a penalty without collecting the penalty if circumstances warrant. Further, even if the ERO or a Regional Entity declines to assess a monetary penalty during the initial period, they are authorized to require remedial actions where a Reliability Standard has been violated. Furthermore, where the ERO uses its discretion and does not assess a penalty for a Reliability Standard violation, we encourage the ERO to establish a process to inform the user, owner or operator of the Bulk-Power System of the violation and the potential penalty that could have been assessed to such entity and how that penalty was calculated. We leave to the ERO's discretion the parameters of the notification process and the amount of resources to dedicate to this effort. Moreover, the Commission retains its power under section 215(e)(3) of the FPA to bring an enforcement action against a user, owner or operator of the Bulk-Power System.

224. The Commission believes that the goal should be to ensure that, at the outset, the ERO and Regional Entities can assess a monetary penalty in a situation where, for example, an entity's non-compliance puts Bulk-Power System reliability at risk. Requiring the ERO and Regional Entities to focus on the most serious violations will allow the industry time to adapt to the new regime while also protecting Bulk-Power System reliability by allowing the ERO or a Regional Entity to take an enforcement action against an entity whose violation causes a significant disturbance. Our approach strikes a reasonable balance in ensuring that the ERO and Regional Entities will be able to enforce mandatory Reliability Standards in a timely manner, while still allowing users, owners and operators of the Bulk-Power System time to acquaint themselves with the new requirements and enforcement program. In addition, our approach ensures that all users, owners and operators of the Bulk-Power System take seriously mandatory, enforceable reliability standards at the earliest opportunity and before the 2007 summer peak season.

225. National Grid, among others, states that the Commission should allow enforcement discretion on an ongoing basis, for example, when the ERO or a Regional Entity interprets a Reliability Standard for the first time. The Commission agrees that, separate from our specific directive that all concerned focus their resources on the most serious violations during an initial period, the ERO and Regional Entities retain enforcement discretion as would any enforcement entity. Such discretion, in fact, already exists in the guidelines; as we stated in the ERO Certification Order, the Sanction

Guidelines provide flexibility as to establishing the appropriate penalty within the range of applicable penalties.[103]

5. International Coordination

226. In response to concerns regarding international coordination of action on proposed Reliability Standards, the Commission reaffirmed its recognition of the importance of international coordination, previously discussed in both Order No. 672[104] and the ERO Certification Order.[105]

a. Comments

227. Ontario IESO agrees with the Commission "that NERC's development of a coordination process, together with the existing means of communications and coordination such as the United States – Canada Bilateral Electric Oversight Group will provide the necessary mechanisms for international coordination" and supports the coordination process proposed by NERC in its October 18, 2006 filing in Docket No. RR06-1-003.[106]

228. EEI and National Grid state that it is not sufficient to coordinate remands through NERC alone because both the Commission and Canadian provincial authorities have the ultimate say in approving applicable Reliability Standards. They advocate that the various regulators commit to coordinate through a formal mechanism, such as a memorandum of understanding. According to EEI, the Commission should coordinate with its international counterparts when directing modifications to Reliability Standards to ensure that the resulting Reliability Standards are uniform to the greatest extent possible. NPCC adds that the Commission should coordinate with its international counterparts when proposing to hold, remand or reject a proposed Reliability Standard to avoid inconsistencies in Reliability Standards application.

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[103] ERO Certification Order at P 451.

[104] See Order No. 672 at P 400.

[105] ERO Certification Order at P 286.

[106] Compliance Filing of the North American Electric Reliability Council and the North American Electric Reliability Corporation Addressing Non-Governance Issues, Appendix 3C, Docket No. RR06-1-000 (October 18, 2006).

229. National Grid states that, where similar interpretations and modifications to Reliability Standards are not adopted by the provincial authorities in Canada, there is potential for conflicting requirements for interconnected facilities. The Alberta ESO is also concerned that, due to regulatory/legislative requirements and industry structures in Canada, some of the Reliability Standards may not be implemented as they are written. Therefore it requests that the Commission require that the international coordination process include a provision where variances are identified by these international governmental authorities to minimize the possibility of a governmental authority remanding a Reliability Standard. According to Alberta ESO, while the goal should be consistent, North America-wide Reliability Standards, there will be instances where this is not achievable.

230. WIRAB advises that some Canadian provinces or Mexican authorities may approve NERC-proposed Reliability Standards with changes or modifications. It is important to allow minor variations across such jurisdictions to minimize the possibility of a governmental authority remanding a Reliability Standard. According to WIRAB, the goal should be a consistent system throughout North America with enough flexibility for some jurisdictional variation when uniformity is not immediately possible.

b. Commission Determination

231. In the January 2007 Compliance Order, the Commission stated that, to minimize the possibility of a governmental authority directing a remand, it seemed appropriate for such governmental authorities to have an opportunity to provide NERC with input prior to its filing for governmental approval of a proposed Reliability Standard.[107] In that order, the Commission agreed with NERC's proposal to facilitate informal conferences to provide an opportunity for governmental authorities to consult with NERC and stakeholder representatives regarding Reliability Standard development work-plans, objectives and priorities, and emerging Reliability Standards.[108] While we did not initiate a formal mechanism for coordination as EEI and National Grid now suggest, we did state that we anticipate that the Commission and counterpart governmental authorities in Canada and Mexico will convene regular meetings to coordinate on issues relating to reliability. We reaffirm that approach as an appropriate framework for addressing matters of international coordination in the context of continent-wide Reliability Standards.

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[107] January 2007 Compliance Order at P 44.

[108] Id.

232. We agree with Alberta ESO and WIRAB that the goal should be consistent, North America-wide Reliability Standards, but that this may not be achievable in all instances. For example, in this rulemaking the Commission is approving several regional differences in Reliability Standards; in the United States, NERC identifies regional variations by submitting them to the Commission in the form of a Reliability Standard.[109]

233. In response to WIRAB, if a governmental authority in Canada or Mexico requests that NERC modify a continent-wide Reliability Standard rather than create a regional variance, NERC must submit any revised Reliability Standard to the Commission. The Commission will then have an opportunity to review the proposed revised Reliability Standard, taking into account the request of the foreign governmental authority.

E. Common Issues Pertaining to Reliability Standards

1. Blackout Report Recommendation on Liability Limitations

234. In the NOPR, the Commission stated that the Blackout Report recommendations, many of which address key issues for assuring Bulk-Power System reliability, have received international support and represent a well-reasoned and sound basis for action. Thus, in the discussion of a particular proposed Reliability Standard, the NOPR often recognized the merit of a specific Blackout Report recommendation and reaffirmed the reasoning behind such recommendation in proposing to approve, with a proposed directive to modify, a specific Reliability Standard. Further, the Commission indicated that a modification to a proposed Reliability Standard based on a Blackout Report recommendation should receive the highest priority in terms of NERC's Work Plan.[110]

235. The Blackout Report's Recommendation No. 8 recognized that timely and sufficient action to shed load on August 14, 2003 would have prevented the spread of the blackout beyond northern Ohio, and recommended that legislative bodies and regulators should: (1) establish that operators (whether organizations or individuals) who initiate load shedding pursuant to operational guidelines are not subject to liability suits and (2) affirm publicly that actions to shed load pursuant to such guidelines are not indicative of operator failure.[111]

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[109] Order No. 672 at P 296.

[110] NOPR at P 99-100.

[111] Blackout Report at 147.

a. Comments

236. EEI states that the Commission should adopt OATT liability limitations to implement Blackout Report Recommendation No. 8 because compliance with mandatory Reliability Standards may expose transmission operators to liability for actions required by a Reliability Standard; Blackout Report Recommendation No. 8 identified this concern and recommended that legislative bodies and regulators establish that operators who initiate load shedding are not subject to liability. EEI disagrees with the suggestion that the Commission cannot shield operators from liability suits. EEI states that the Commission has the authority under FPA sections 205 and 206 to provide liability protection and has done so for several transmission operators in several cases by approving amendments to open access transmission tariffs providing for liability limitations.[112] However, it notes that the Commission has rejected efforts by other parties to implement similar protections.[113]

b. Commission Determination

237. Consistent with Order No. 890, the Commission does not adopt new liability protections.[114] The Commission does not believe any further action is needed to implement Blackout Report Recommendation No. 8. First, the Task Force found that no further action is needed.[115] Further, the Blackout report indicated that some states already have appropriate protection against liability suits.[116] Finally, in Order No. 888, the Commission declined to adopt a uniform federal liability standard and decided that, while

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[112] EEI at 16, citing Southwest Power Pool, Inc., 112 FERC ¶ 61,100 (2005); Midwest Independent Transmission System Operator, Inc., 110 FERC ¶ 61,164 (2005); ISO New England, Inc., 106 FERC ¶ 61,280, order on reh'g, 109 FERC ¶ 61,147 (2004).

[113] Id., citing Southern Company Services, Inc., 113 FERC ¶ 61,239 (2005).

[114] Order No. 890 at P 1671-77.

[115] US-Canada Power System Outage Task Force, Final Report on Implementation of Task Force Recommendations at 22 (Oct. 3, 2006), available at http://www.oe.energy.gov/news/blackout.htm ("Action Required to Fully Implement Recommendation 8: No further action under this recommendation is needed").

[116] Id. ("In the United States, some state regulators have informally expressed the view that there is appropriate protection against liability suits for parties who shed load according to approved guidelines.")

it was appropriate to protect the transmission provider through force majeure and indemnification provisions from damages or liability when service is provided by the transmission provider without negligence, it would leave the determination of liability in other instances to other proceedings.[117] Order No. 890 reaffirmed this decision. EEI has offered no arguments that demonstrate that an OATT limit on liability is warranted.

2. Measures and Levels of Non-Compliance

238. The NOPR noted that, according to the Staff Preliminary Assessment, a number of proposed Reliability Standards do not contain Measures[118] or Levels of Non-Compliance,[119] or both. NERC, in its petition, identified 21 Reliability Standards that lack Measures or Levels of Non-Compliance and indicated that it planned to file modified Reliability Standards that include the missing Measures and Levels of Non-Compliance in November 2006. On November 15, 2006, NERC made this filing.

239. In the NOPR, while the Commission recognized the importance of having Measures and Levels of Non-Compliance specified for each Reliability Standard, the Commission also stated that the absence of these two elements is not critical to the determination of whether to approve a proposed Reliability Standard. Rather, the most critical elements of a Reliability Standard are the Requirements, and, if properly drafted, a Reliability Standard may be enforced even in the absence of specified Measures or Levels of Non-Compliance.[120] Thus, the NOPR proposed to approve a Reliability Standard even though it may lack Measures or Levels of Non-Compliance, or where these elements contain ambiguities, provided that the Requirement is sufficiently clear

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[117] Order No. 888-B, 81 FERC ¶ 61,248 at 62,081 (1997), order on reh'g, Order No. 888-C, 82 FERC ¶ 61,046 (1998), aff'd in relevant part sub nom. Transmission Access Policy Study Group v. FERC, 225 F.3d 667 (D.C. Cir. 2000), aff'd sub nom. New York v. FERC, 535 U.S. 1 (2002).

[118] Although NERC does not formally define "Measures," NERC explains that they "are the evidence that must be presented to show compliance" with a standard and "are not intended to contain the quantitative metrics for determining satisfactory performance." NERC Comments to the Staff Preliminary Assessment at 104.

[119] "Levels of Non-Compliance" are established criteria for determining the severity of non-compliance with a Reliability Standard. The Levels of Non-Compliance range from Level 1 to Level 4, with Level 4 being the most severe.

[120] NOPR at P 105-07.

and enforceable. Where a Reliability Standard would be improved by providing missing Measures or Levels of Non-Compliance or by clarifying ambiguities with respect to Measures or Levels of Non-Compliance, the NOPR proposed to approve the Reliability Standard and concurrently direct NERC to modify the Reliability Standard accordingly.

240. The NOPR explained that the common format of NERC's proposed Reliability Standards calls for a "data retention" metric. Yet, some proposed Reliability Standards either do not contain a data retention requirement or state that no record retention period applies. In the NOPR, the Commission requested comment on: (1) whether the retention time periods specified in various Reliability Standards proposed by NERC are sufficient to foster effective enforcement and (2) what, if any, additional records retention requirements should be established for the proposed Reliability Standards.

a. Improving Measures and Levels of Non-Compliance

i. Comments

241. A number of commenters raise concerns regarding the adequacy of current Measures and Levels of Non-Compliance. Some commenters, such as Nevada Companies, state that some Reliability Standards do not need multiple Measures and multiple Levels of Non-Compliance when such items do not fit the context of the specific Reliability Standard. According to Nevada Companies, some proposed Reliability Standards are more like business practices that are susceptible to a pass/fail test, and are not necessarily amenable to multiple Measures and Levels of Non-Compliance. Progress and Xcel maintain that Measures and Levels of Non-Compliance do not necessarily need to be added to every Reliability Standard.

242. Constellation is concerned that the Levels of Non-Compliance do not appear to be based on objective criteria, but rather appear to be based on arbitrary criteria and assumptions regarding the impact on reliability, which could lead to penalties that are excessive compared to the violation. MISO states that the original intent of the Levels of Non-Compliance was to assign a scale based on the impact on the Interconnection. MISO asserts that many Requirements are rated at too high a level and that many events that would be rated "level 4" are really just administrative requirements. It asserts that there are more "level 4" events than other categories, when logic would imply a pyramid structure with only a few items at the highest "level 4." MISO states there should be a simplified process that measures the true impact on reliability. MISO and Dynegy state that there should also be an "administrative infraction" category created in addition to the current "low," "medium" and "high," so that the enforcement of supporting tasks can be handled expeditiously.

243. NYSRC states that, in NERC's rush to file with the Commission the 20 revised Reliability Standards with new Measures and Levels of Non-Compliance, the revised Reliability Standards were submitted to the NERC ballot body as a group, rather than individually. It maintains that the group treatment prevented stakeholders from providing the careful attention that each revised Reliability Standard deserves. NYSRC believes that, as a result, Requirements for a number of these Reliability Standards are flawed. While their prompt approval may be justified to have them in place for the upcoming summer, there is not a sufficient basis for the Commission to conclude that the weaknesses identified in these 20 Reliability Standards have been adequately addressed. NYSRC recommends that the Commission approve the 20 revised Reliability Standards and direct the ERO to more carefully address the weaknesses identified in those standards and to individually submit each revised standard to a ballot for separate consideration.

244. MISO, International Transmission and Constellation also raise concerns with NERC's Violation Risk Factors. They are concerned that risk is, in some cases, being confused with importance. For example, MISO states that NERC appears to be assigning risk to every sentence in each proposed Reliability Standard, including explanatory information and administrative requirements, thereby confusing risk with importance. MISO states that, while there may be many things that a transmission operator does that are important, failure to do an important thing one time would not necessarily jeopardize the Interconnection or cause a cascading failure.

245. MISO believes the definition of risk should reflect the likelihood that something serious is likely to happen if an event occurs. International Transmission, Constellation and MISO believe that a high risk event should, in and of itself, pose a significant threat to reliability and should not assume that multiple events occur simultaneously. According to MISO, only a small number of Requirements in the Reliability Standards fit the true definition of high risk. Constellation maintains that rating too many Requirements as high risk will water down the Requirements, and could shift the focus of attention away from the truly high risk Requirements, leading to a less effective, less efficient reliability program.

ii. Commission Determination

246. With regard to the comments of Nevada Companies, Progress and others, we believe that the ERO should have flexibility in initially developing appropriate Measures and Levels of Non-Compliance. For example, the ERO in the first instance should determine whether a Measure is necessary for every Requirement of a particular Reliability Standard, or whether every Reliability Standard must have the same number of Levels of Non-Compliance. Entities interested in developing meaningful Measures and Levels of Non-Compliance should, we find, participate in the ERO's Reliability Standards development process to ensure that their opinions are considered.

247. With regard to the concerns of MISO and Constellation, we agree as a general principle that Levels of Non-Compliance should be based on objective criteria and that a "level 4" violation should reflect a commensurate level of severity in its impact on Bulk-Power System reliability. However, we will allow the ERO in the first instance to determine whether specific revisions to particular Reliability Standards are needed to address these concerns. While we consider the appropriateness of Measures and Levels of Non-Compliance in our standard-by-standard review, we believe in the first instance it is the responsibility of the ERO to develop meaningful Measures and Levels of Non-Compliance, and those seeking to influence the process, as we have already found, should participate in the ERO's Reliability Standards development process. Likewise, we leave it to the ERO to determine initially whether there is any merit in developing a category of "administrative infraction" as suggested by some commenters.

248. The Commission agrees with NYSRC that, as a general matter, each Reliability Standard should be independently balloted in the Reliability Standards development process. However, the Commission will not require the ERO to resubmit each of the 20 revised Reliability Standards to the Reliability Standards development process for separate consideration. We do not believe such an action is required by the statute and would otherwise unnecessarily delay implementation of the proposed Reliability Standards. However, we expect that the ERO's Reliability Standards development process will provide adequate opportunity for independent consideration by stakeholders of each standard under consideration in the future.

249. MISO, International Transmission and Constellation raise concerns with NERC's Violation Risk Factors. The NERC board approved the Violation Risk Factors for Version 0 Reliability Standards and submitted them to the Commission on February 23, 2007. The Commission is reviewing the Violation Risk Factors in a seprate proceeding in Docket No. RR07-9-000. Thus, these issues are not ripe for consideration in this Final Rule. MISO, International Transmission and Constellation may raise concerns they have with the Violation Risk Factors in that separate proceeding.

b. Enforcement Implications

i. Comments

250. Certain commenters, such as EEI, Northeast Utilities, APPA and TAPS, state that Reliability Standards that lack clear Measures or Levels of Non-Compliance should not be fully enforced because they are not just and reasonable and raise potential due process concerns. APPA states that this is equally true of Reliability Standards that lack Violation Risk Factors or Violation Severity Levels because there is not proper notice as to the amount or range of monetary penalties to be assessed for a particular violation. APPA recommends that the Commission approve Reliability Standards that lack

Measures and Violation Severity Levels, but that, until the deficiencies are corrected, require NERC and Regional Entities to waive imposition of monetary penalties. APPA would, however, reserve the Commission's right to impose monetary sanctions where warranted and also require compliance with NERC and Regional Entity remedial action directives for these Reliability Standards.

251. WIRAB disagrees that Reliability Standards can be consistently enforced based solely on sufficiently clear and enforceable Requirements. According to WIRAB, Levels of Non-Compliance are needed to inform parties of the consequences of non-compliance. WIRAB is concerned that a complex penalty structure that requires Regional Entities to consider multiple subjective mitigating and aggravating factors will compound the problems of missing and ambiguous Measures and Levels of Non-Compliance. A simple penalty structure would reduce enforcement ambiguities, increase uniformity and promote greater clarity. FirstEnergy states that, without Measures and Levels of Non-Compliance, a Reliability Standard cannot meet the Commission's requirement that a Reliability Standard must have a "clear criterion or measure of whether an entity is in compliance with a proposed Reliability Standard."[121]

252. Progress and Xcel state that the Commission should clarify that the Measures and Levels of Non-Compliance are included solely for guidance and that only violations of the Requirements are subject to penalties. Portland General maintains that the Measures are an integral part of each Reliability Standard because entities will need to know the Measures so that they can build them into their compliance efforts from the beginning. In a similar vein, National Grid states that the lack of clear Measures or Levels of Non-Compliance also makes it difficult for users, owners and operators to tailor their businesses and practices toward compliance or to track ongoing compliance.

ii. Commission Determination

253. The Commission disagrees with commenters that a Reliability Standard cannot reasonably be enforced, or is otherwise not just and reasonable, solely because it does not include Measures and Levels of Non-Compliance. The Commission adopts the position it took in the NOPR that, while Measures and Levels of Non-Compliance provide useful guidance to the industry, compliance will in all cases be measured by determining whether a party met or failed to meet the Requirement given the specific facts and circumstances of its use, ownership or operation of the Bulk-Power System. As we explained in the NOPR, and reiterate here:

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[121] FirstEnergy at 10-11, citing NOPR at P 16; see also Order No. 672 at P 262, 321-37.

> The most critical element of a Reliability Standard is the Requirements. As NERC explains, "the Requirements within a standard define what an entity must do to be compliant . . . [and] binds an entity to certain obligations of performance under section 215 of the FPA." If properly drafted, a Reliability Standard may be enforced in the absence of specified Measures or Levels of Non-Compliance.[122]

254. APPA, WIRAB and others contend that, without Measures and Levels of Non-Compliance, a Reliability Standard should not be enforced. We disagree. Where a Reliability Standard has Requirements that are sufficiently clear so that an entity is aware of what it must do to comply, sufficient notice has been provided. While it can be helpful to provide additional guidance regarding the amount or range of monetary penalties that may be assessed for a particular violation, the absence of such information is not a defect that renders a Reliability Standard unenforceable. Where the Requirement in a Reliability Standard is sufficiently clear, an entity will know what it should be doing to comply and will know that there are consequences for failure to comply. Therefore, where a Requirement in a Reliability Standard is sufficiently clear, we approve the Reliability Standard even though it may lack Measures or Levels of Non-Compliance. Where a Reliability Standard can be improved by providing missing Measures or Levels of Non-Compliance or by clarifying ambiguities with respect to Measures or Levels of Non-Compliance, we approve the Reliability Standard and concurrently direct NERC to modify it accordingly.[123]

255. In response to FirstEnergy, where the Requirement in a Reliability Standard is sufficiently clear, that Reliability Standard meets the requirement that it must have a "clear criterion or measure of whether an entity is in compliance with a proposed Reliability Standard." The fact that NERC, in certain circumstances, did not include Measures and Levels of Non-Compliance does not make an otherwise clear Requirement

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[122] NOPR at P 105 (footnote omitted).

[123] APPA raises concerns regarding the completeness or adequacy of Measures and Levels of Non-Compliance in its discussion of specific Reliability Standards. In such instances, APPA argues that the Reliability Standard should not be enforced until current Measures and Levels of Non-Compliance are improved or, where incomplete, new ones developed. Applying our above rationale to these particular circumstances, while the ERO should improve or develop Measures and Levels of Non-Compliance where necessary, we will not delay the enforcement of such Reliability Standards until the ERO develops such improvements or additions.

unenforceable. Neither section 215 nor the Commission's regulations require the level of specificity sought by FirstEnergy in order for a Reliability Standard to be enforceable.

256. Progress and Xcel seek clarification that Measures and Levels of Non-Compliance are included solely for guidance and that only violations of the Requirements are subject to penalties. While the Commission generally agrees that it is a violation of the Requirements that is subject to a penalty, we recognize that because Measures are intended to gauge or document compliance, failure to meet a Measure is almost always going to result in a violation of a Requirement.

257. While we applaud NERC for adding additional levels of detail to its compliance enforcement program, we note that NERC and the Regional Entities should have further guidance as to how to use their enforcement discretion from the Commission's Policy Statement on Enforcement.[124] Further, if NERC does not submit Violation Risk Factors and Violation Severity Levels before NERC's enforcement program becomes effective, the Commission has reserved the ability to take appropriate action to ensure that the penalty-setting process described in the Sanction Guidelines is operative.[125]

c. Data Retention

i. Comments

258. In the NOPR, the Commission solicited comments regarding the sufficiency of data retention requirements in the Reliability Standards.[126] NERC states that the compliance data retention requirement is a defined element in the Reliability Standard template and that all data retention requirements, even those that are currently missing, will be reviewed and updated as part of the Reliability Standards Work Plan. NERC requests that the Commission not attempt to fix specific data retention requirements on the basis of comments received during this proceeding. NERC would prefer that the Commission direct those comments and any goals the Commission may have with regard to data retention back to NERC for resolution through the Reliability Standards development process.

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[124] Enforcement of Statutes, Orders, Rules, and Regulations, 113 FERC ¶ 61,068 (2005) (Policy Statement on Enforcement).

[125] January 2007 Compliance Order at P 93.

[126] NOPR at P 107.

259. SoCal Edison supports the data retention requirements in the Reliability Standards. APPA and SERC recommend that data retention requirements should be stated in each Reliability Standard and determined on a case-by-case basis through the Reliability Standards development process.

260. SERC agrees with NERC that an appropriate retention period is five years unless otherwise specified in a Reliability Standard. ISO-NE submits that any data retention policy established by the ERO should be in line with the five year civil penalty statute of limitations for violations of NERC Standards, while APPA cautions that detailed operational data may be so voluminous that a five-year retention requirement would be burdensome and of questionable value. MRO believes that the Reliability Standards retention period should be commensurate with operating and planning horizons, documentation related to a planning standard should be retained longer and that there should be a retention period of at least three years.

261. FirstEnergy states that individual record retention requirements on a standard-by-standard basis will create confusion and will be difficult to track. It therefore suggests that the Commission establish a uniform records retention standard of "current calendar year plus three years" for all proposed Reliability Standards that include a data retention requirement. Similarly, Entergy states that data retention requirements established for the Reliability Standards should be uniform and asks the Commission to direct the ERO to implement records retention requirements of no longer than three years.

262. International Transmission and Entergy comment that only the relevant core reliability requirements of the Reliability Standards should be subject to data retention requirements. International Transmission states that, in instances where retaining evidence of compliance is impractical or where no evidence exists of compliance, it is appropriate that no documentation be retained. Otherwise the record retention period should be no less than the prevailing audit frequency. Progress and Xcel agree that inclusion of data retention metrics in the Reliability Standards would be useful, but the Commission should make clear that violations of the data retention metrics are not subject to separate penalties under section 215 of the FPA.

ii. Commission Determination

263. The Commission agrees that it is appropriate for each Reliability Standard to have a data retention requirement. We are not persuaded that a one-size fits all approach to data retention is appropriate, however, because different Reliability Standards may require data to be retained for shorter or longer periods. Nor are we persuaded that the Commission should set a data retention requirement for any Reliability Standard for which one is currently lacking. Therefore, the Commission will not prescribe a set data retention period to apply to all Reliability Standards. Instead, the Commission directs the

ERO to review and update the data retention requirements in each Reliability Standard as it is reevaluated through its Reliability Standards development process and submit the result for Commission approval. In doing so, NERC should take into account the comments raised in this proceeding and should seek input from other industry stakeholders.

3. Ambiguities and Potential Multiple Interpretations

264. In the NOPR, the Commission proposed that a proposed Reliability Standard that has Requirements that are so ambiguous as to not be enforceable should be remanded.[127] A Reliability Standard that has sufficiently clear Requirements, Measures and Levels of Non-Compliance language and otherwise satisfies the statutory standard of review should be approved. A proposed Reliability Standard that has sufficiently clear Requirements, but Measures or Levels of Non-Compliance that are ambiguous (or none at all), should be approved in some cases with a directive that the ERO develop clear and objective Measures and Levels of Non-Compliance language. In other cases, where some ambiguity may exist but there is also a common interpretation for certain terms based on the best practices within the industry, the Commission proposed to adopt that interpretation in the NOPR.

a. Comments

265. NERC maintains that, even if the Commission believes that there is some degree of ambiguity in some of the Reliability Standards, making the Reliability Standards mandatory enables NERC and Regional Entities to respond to questionable performance by clarifying to the responsible entity, and others, on a going-forward basis what behavior would constitute compliance with the Reliability Standards. Thereafter, participants would know how NERC and the Regional Entities were interpreting the Reliability Standards. According to NERC, this information would become part of the public record and help to eliminate any ambiguity as to what constitutes compliant and noncompliant behavior under a Reliability Standard. In contrast, if the Reliability Standards remain voluntary or temporarily unapproved, NERC contends that it and the Regional Entities will lack a legal basis to compel corrective behavior.

266. In contrast, Reliant urges the Commission to either not approve ambiguous Reliability Standards or approve them without subjecting entities to penalties. The level of ambiguity in many cases appears to violate the "just and reasonable" criteria for

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[127] NOPR at P 110-12.

approval. It states that entities should not be found in violation based on retroactive interpretation of a Reliability Standard.

267. EEI expresses concern that approval and enforcement of a Reliability Standard that includes ambiguous requirements or lacks certain technical features or specificity may raise due process concerns if the required performance or performance measurements are not "clear and unambiguous." Both in this docket and on a going forward basis, EEI questions whether proposed Reliability Standards with various shortcomings or deficiencies are sufficiently clear to meet the legal standard of review.

268. EEI and Wisconsin Electric state that it is not clear what "common interpretations" the Commission refers to in the NOPR or whether they are accepted or known across the industry. Wisconsin Electric states that common interpretations and best practices must be clearly spelled out and made available for review. These interpretations should be incorporated into the audit guidelines. Further, EEI states that common interpretations should not supersede provisions that are clearly stated in a Reliability Standard. According to EEI, if part of a proposed Reliability Standard is not clear, the NERC Reliability Standards development process should be used to clarify it. Further, EEI maintains that the Commission should require the ERO to review all existing industry sources, such as the NERC glossary or Institute of Electrical and Electronics Engineers (IEEE) standards, to supplement the interpretation of Reliability Standards. Undocumented "common interpretations" should be relied on only as a last resort. Moreover, EEI contends that, if such interpretations are to be used as a basis for assessing compliance and enforcement, they must be clearly spelled out and made available in advance.

269. MISO notes that some Reliability Standards may have portions applicable to five or more entities and that there are situations where a particular functional entity is not mentioned in the "Applicability" section of the Reliability Standard, but they show up in the Requirements. It believes that the industry needs a database-style tool that is a companion to the Reliability Standards that permits any functional entity to sort and find all requirements and supporting compliance information applicable to it. Such a tool would help entities prevent oversights and also help NERC eliminate redundancy in the Reliability Standards.

270. MISO also states that, in developing the Version 0 Reliability Standards, there was a conscious decision to include supporting information in the Reliability Standards themselves. As a result, there is now explanatory material in the Reliability Standards that is presented in context as Requirements. According to MISO, users now are trying to figure out how to measure Requirements that are really supporting text. MISO believes that the process should be simplified by separating each Reliability Standard into its core requirements and supporting information.

271. Similarly, Constellation, International Transmission and Dynegy comment that the Commission should distinguish between those Requirements in each Reliability Standard that are core requirements as opposed to supporting information, an explanatory statement, or an administrative process. International Transmission and Dynegy state that Measures should only apply to these core reliability requirements. Reliant is also concerned that each Reliability Standard contains a great deal of explanatory text, formatted to appear as enforceable obligations.

272. International Transmission, Reliant and MISO note that the proposed Reliability Standards contain many inherently ambiguous phrases or terms that can be misapplied, including "adequate" or "adequately," "sufficient," "immediate," "where technically feasible," "as soon as possible" and "where practical." Reliant states that all ambiguous language must be eliminated before penalties can be assessed. MISO and Wisconsin Electric state that, while use of such terms may be acceptable in explanatory information, if a term cannot be definitively and objectively defined, it should not appear in the core Requirements of a Reliability Standard.

273. Alcoa reiterates its concern that the Commission has not defined the target level of reliability of the Bulk-Power System that the Reliability Standards are intended to achieve. Further, Alcoa is concerned that the proposed Reliability Standards are fragmented and overlap and in some cases may result in inconsistent treatment of the same issue. Alcoa states that the ERO should move towards a more encompassing approach for developing Reliability Standards in which a reliability goal is addressed from all aspects in a more consistent manner. Therefore, Alcoa maintains that the Commission should require NERC to engage in advance planning, mapping out what kind of reliability is adequate for the Bulk-Power System and then developing a plan to get there.

b. Commission Determination

274. The Commission finds that it is essential that the Requirements for each Reliability Standard, in particular, are sufficiently clear and not subject to multiple interpretations. Where the Requirements portion of a Reliability Standard is sufficiently clear (and no other issues have been identified), we approve the Reliability Standard. Upon review of the Reliability Standards and the comments submitted in response to the NOPR, the Commission finds that none of the Reliability Standards that we approve today contain an ambiguity that renders it unenforceable or otherwise unjust and unreasonable. As discussed in our standard-by-standard review, each Reliability Standard that we approve contains Requirements that are sufficiently clear as to be enforceable and do not create due process concerns.

275. The underlying assumption of many of the commenters seems to be that the Reliability Standards must spell out in minute detail all factual scenarios that might violate a Requirement and the precise consequences of that violation. But due process requirements do not go so far. Indeed, many government regulatory schemes provide far less specificity in terms of what is required or proscribed, and yet those regulations are routinely enforced.[128] Indeed, many tariffs on file with the Commission do not specify every compliance detail, but rather provide some level of discretion as necessary to carry out a particular act. This does not mean the tariffs are unenforceable; rather, it means that, if a dispute arises over compliance and there is a legitimate ambiguity regarding a particular fact or circumstance, that ambiguity can be taken into account in the exercise of the Commission's enforcement discretion. Therefore, we find that the Reliability Standards must strike a balance between a level of specificity that places users, owners and operators on notice of what is required, and a level of generality that encompasses unanticipated but serious actions or omissions that could affect Bulk-Power System reliability. We are satisfied that the Requirements portions of each Reliability Standard that we approve in this Final Rule appropriately strike this balance.

276. Some commenters argue that certain Reliability Standards require additional specificity or else users, owners and operators will not understand the consequences of a violation. This notion is similarly misplaced because the potential (if not actual) consequences for any violation are clearly spelled out – the statute permits the ERO to assess civil penalties of up to "$1 million per violation, per day" in addition to other remedies. The Commission has explained how it will approach civil penalties in its Enforcement Policy Statement. The ERO has provided guidance in its compliance filings, and will continue to do so, as to how it will administer compliance and enforcement functions. Clarity should not be confused with certainty. The former is provided by the statute, the Final Rule and the aforementioned authorities. The latter is simply unavailable in this context. Indeed, guaranteeing in advance specific enforcement outcomes hampers necessary and appropriate enforcement flexibility and poses the danger of users, owners and operators of the Bulk-Power System simply calculating the cost of a violation into the cost of doing business – a dynamic that would frustrate the very purpose of a mandatory Reliability Standards system, which is to promote reliability.

277. The Commission agrees with NERC that, even if some clarification of a particular Reliability Standard would be desirable at the outset, making it mandatory allows the ERO and the Regional Entities to provide that clarification on a going-forward basis

[128] Many sections of the FPA, including section 215, use such terms as just and reasonable or unduly discriminatory or preferential or even the public interest.

while still requiring compliance with Reliability Standards that have an important reliability goal. Further, we support the ERO's efforts to review each of the current Reliability Standards to improve them and provide yet further clarity. We encourage all interested entities, especially those that have identified specific suggestions for improvement, to participate in the ERO's Reliability Standards development process.

278. The Commission finds that these Reliability Standards, with the interpretations provided by the Commission in the standard-by-standard discussion, meet the statutory criteria for approval as written and should be approved. In any event, penalties are warranted under section 215 only when an entity knew or reasonably should have known that its acts or omissions were contrary to the Reliability Standards. Wisconsin Electric seems to interpret the Commission as requiring that users, owners and operators of the Bulk-Power System comply with best practices under the Reliability Standards. We disagree. While we appreciate that many entities may perform at a higher level than that required by the Reliability Standards, and commend them for doing so, the Commission is focused on what is required under the Reliability Standards, we do not require that they exceed the Reliability Standards. We agree with EEI that a common interpretation cannot supplant a provision that is clearly stated in a Reliability Standard. We also agree, however, that, over time, these interpretations could be incorporated either into the Reliability Standard itself through the Reliability Standards development process or the ERO and Regional Entity audit guidelines.

279. The Commission disagrees with MISO that some Reliability Standards as proposed are unclear with respect to applicability. In certain situations, Bulk-Power System reliability depends on more than one entity complying with a Reliability Standard. Further, in certain situations, the Requirement of a Reliability Standard may reference an entity that is not itself responsible for compliance with the Reliability Standard, for example, where an entity responsible for compliance must report information to or communicate with another entity, without that other entity being required to comply with the Reliability Standard. However, in its review of Reliability Standards, the ERO should ensure that, if a functional entity must comply with the Reliability Standards, it must be mentioned in the Applicability section. In this regard, we encourage the ERO to consider development of a database-style tool that is a companion to the Reliability Standards that permits any user, owner or operator to sort and find all Requirements applicable to it.

280. In response to MISO, Constellation, International Transmission and Dynegy, the Commission believes that the Requirements in each Reliability Standard are core obligations and that the Measures and Levels of Non-Compliance provide useful guidance to the industry and can be supporting information, an explanatory statement or an administrative process. As discussed above, NERC is to enforce the Requirements in

a Reliability Standard. The Measures are part of the Reliability Standards and, if not met, are almost always going to result in a violation of a Requirement.

281. The Commission has previously addressed Alcoa's concerns about defining the target level of reliability of the Bulk-Power System that the Reliability Standards are intended to achieve. In the January 2007 Compliance Order, the Commission directed the ERO to establish a stakeholder process to define adequate level of reliability.[129] While the Commission agrees that this is a worthwhile effort, we disagree with Alcoa that Reliability Standards cannot be approved until this analysis is done. Such analysis is not required by the statute, and Alcoa has not identified any compelling reason why the proposed Reliability Standards are defective without the benefit of such analysis.

4. Technical Adequacy

282. In the NOPR, we stated that we are cautious about drawing any general conclusions about technical adequacy as we consider this a matter that can only be addressed on a standard-by-standard basis. Where we have specific concerns regarding whether a Requirement set forth in a proposed Reliability Standard may not be sufficient to ensure an adequate level of reliability or represents a "lowest common denominator" approach, we address those concerns in the context of that particular Reliability Standard.[130]

a. Comments

283. NYSRC shares the Commission's concerns regarding the use of a "lowest common denominator" approach in the development of Reliability Standards and agrees that this concern can be addressed only on a standard-by-standard basis. NYSRC maintains that, in commenting on pending ERO Reliability Standards, the NYSRC believed could weaken existing Reliability Standards, the NERC drafting team responded that a region is free to develop more stringent Reliability Standards. NYSRC maintains that the ability of a Regional Entity to propose more stringent Reliability Standards to meet the reliability needs of that region does not justify the weakening of continent-wide Reliability Standards by use of a "lowest common denominator" approach to achieve greater support for a proposed Reliability Standard. NYSRC recommends that the Commission reaffirm that it will carefully review subsequent proposed ERO Reliability

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[129] January 2007 Compliance Order at P 16.

[130] NOPR at P 115.

Standards to ensure that they are technically adequate and do not weaken the current level of reliability.

284. ATC agrees with the Commission that the industry, organized in Regional Entities under the ERO, must continue to be wholly accountable for the technical adequacy of the Reliability Standards. ATC thus suggests that the Commission's efforts to "independently assess the technical adequacy of any proposed Reliability Standard" focus on Commission participation in and support of the Reliability Standards development processes at NERC and at the regions.

b. Commission Determination

285. The Commission fully intends to address technical adequacy on a standard-by-standard basis and the Commission agrees that the ability of a Regional Entity to propose more stringent Reliability Standards to meet the reliability needs of that region does not justify the weakening of continent-wide Reliability Standards. In this regard, we note that, in the January 2007 Compliance Order, we directed the ERO to closely monitor the voting results for Reliability Standards and to report to us quarterly for the next three years its analysis of the voting results, including trends and patterns that may signal a need for improvement in the voting process, such as the rejection of a Reliability Standard and subsequent ballot approval of a less stringent version of the Reliability Standard.[131] The Commission will use this information to evaluate whether it needs to re-examine the Reliability Standard development procedure. In doing so, the Commission will also be sensitive to concerns that "lowest common denominator' Reliability Standards are being developed.

286. The Commission agrees that its staff should participate in and support the Reliability Standards development processes, to the extent consistent with its regulatory role. The Commission's participation in those processes will not constitute its entire assessment of the technical adequacy of a proposed Reliability Standard. The Commission will also conduct an assessment during its rulemaking or order process after the Reliability Standard is submitted by the ERO to the Commission for approval.

5. Fill-in-the-Blank Standards

287. The NOPR explained that certain Reliability Standards, referred to as fill-in-the-blank standards, require the regional reliability organizations to develop criteria for use

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[131] January 2007 Compliance Order at P 18.

by users, owners or operators within each region.[132] In the NOPR, the Commission expressed concern regarding the potential for the fill-in-the-blank standards to undermine uniformity. With regard to NERC's stated intention to submit an action plan and schedule for completing the fill-in-the-blank standards, the NOPR explained that NERC's plan must be consistent with the discussion in Order No. 672 regarding uniformity and the limited circumstances in which a regional difference would be permitted.[133]

288. Further, the NOPR proposed to require supplemental information regarding any Reliability Standard that requires a regional reliability organization to fill in missing criteria or procedures. The Commission explained that, "where important information has not been provided to us to enable us to complete our review, we are not in a position to approve those Reliability Standards."[134] Therefore, the NOPR proposed to not approve or remand such Reliability Standards until all necessary information is provided, although compliance would still be expected as a matter of good utility practice.

a. Comments

289. NERC, APPA and TAPS support the Commission's proposal to defer consideration of fill-in-the-blank standards. APPA believes that the Commission's proposal balances the need for greater uniformity against the need for regional flexibility.

290. NERC agrees with the Commission's proposal to hold 24 Reliability Standards (mainly fill-in-the-blank standards) as pending at the Commission until further information is provided, and to require that Bulk-Power System users, owners and operators follow these pending standards as "good utility practice" pending their approval by the Commission. NERC also agrees that it and the Regional Entities can monitor compliance with these pending standards using the ERO's authority pursuant to § 39.2(d) of the Commission's regulations. NERC believes this approach is necessary to ensure that there will be no gap during the transition from the current voluntary reliability regime to mandatory and enforceable Reliability Standards.

291. While TAPS supports deferring consideration of fill-in-the-blank standards, it urges the Commission to view with skepticism regional differences within an Interconnection that are not justified by physical differences. It states that such regional

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[132] NOPR at P 116.

[133] Id. at P 121, citing Order No. 672 at P 292; ERO Certification Order at P 274.

[134] NOPR at P 123.

Reliability Standards, even if more stringent, can wreak havoc on competitive markets, especially where entities within the same transmission system or RTO footprint are subject to different regional Reliability Standards. For example, TAPS maintains that inconsistent regional underfrequency load shedding (UFLS) Reliability Standards not justified by physical differences impose unjust burdens on joint action agencies whose integrated load is split between NERC regions. Further, according to TAPS, a region's choice may reflect the historical lack of a balanced process for developing Reliability Standards at the regional level, allowing certain classes of market participants to determine the region's choice.

292. According to ISO-NE, if the Commission withholds approval of these 24 Reliability Standards, the Commission should also withhold approval of Reliability Standards that rely, by reference, on such fill-in-the-blank Reliability Standards.[135] ISO-NE submits that, until the missing information has been provided in the cross-referenced fill-in-the-blank Reliability Standard, it will be impossible for the applicable entities to determine exactly what criteria they are expected to satisfy. APPA raises similar concerns, and suggests that the Commission approve such Reliability Standards but not enforce them until the cross-referenced fill-in-the-blank Reliability Standards are approved.

293. MISO and Wisconsin Electric believe that the fill-in-the-blank standards may be acceptable in certain situations. They give regions some flexibility in implementation, and allow the deployment of a Reliability Standard where it would be difficult to get consensus across several regions. They also move the reliability agenda forward on issues that are historically under state jurisdiction, and some are an accommodation to those regions that want to have a higher Reliability Standard.

294. EEI agrees with the NOPR that, regarding Reliability Standards for which the Commission needs additional information, compliance in the interim would be expected as a matter of good utility practice. While EEI agrees with this approach, it also cautions that the good utility practice provision of an OATT should not be used as an alternative means of enforcement outside of section 215 of the FPA. Similarly, FirstEnergy posits that good utility practice is subject to interpretation and by itself does not provide the level of guidance needed for a mandatory and enforceable Reliability Standard. It asserts that the Commission should not impose compliance burdens indirectly where it has not

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[135] ISO-NE and ISO/RTO Council state that the following Reliability Standards are dependent upon "fill-in-the-blank" standards: FAC-013-1, MOD-010-0, MOD-012-0, MOD-016-1, MOD-017-0, MOD-018-0, MOD-019-0, MOD-021-0, PRC-004-1, PRC-007-0, PRC-008-0, PRC-009-0, PRC-015-0, PRC-016-0, PRC-018-1 and PRC-021-0.

imposed them directly. Xcel asserts that the Commission should rescind the Reliability Policy Statement that defines good utility practice under the pro forma OATT, effective when the Reliability Standards become mandatory in June 2007, because a reliability-related violation should not be subject to two separate enforcement schemes.

295. NPCC recommends that any of the 24 fill-in-the-blank standards that are required to be Reliability Standards should be developed as regional Reliability Standards by the Regional Entity for compliance monitoring and enforcement, backed by the Commission and Canadian provincial regulatory and/or governmental authorities.

296. California PUC states that the NOPR seeks national uniformity notwithstanding regional differences. It states that, in the Western Interconnection, there are 15 existing, enforceable WECC standards pursuant to the WECC Reliability Management System (RMS) that overlap the proposed mandatory Reliability Standards. Five of these WECC standards fall into the fill-in-the-blank standards category. However, there are three additional WECC RMS standards already in effect in the Western Interconnection that do not have a corresponding proposed Reliability Standard. California PUC asks that the Commission consider approving these additional three standards for enforcement in the Western Interconnection. California PUC states that there is no reason for the Commission to exclude any WECC standard already in effect, and that ignoring these established standards when the Reliability Standards are scheduled to go into effect can threaten reliability already being achieved in the Western Interconnection.

b. Commission Determination

297. The Commission requires supplemental information for any Reliability Standard that currently requires a regional reliability organization to fill in missing criteria or procedures. Where important information has not yet been provided to us to enable us to complete our review, we are not in a position to approve or remand those Reliability Standards.[136] Accordingly, we will not approve or remand such Reliability Standards until the ERO submits further information. Until such information is provided, compliance with fill-in-the-blank standards should continue on a voluntary basis, and the Commission considers compliance with such Reliability Standards to be a matter of good utility practice.

298. As noted above, some commenters such as TAPS urge the Commission to view most regional differences with skepticism, while others such as MISO and Wisconsin Electric favor some regional variation. The Commission affirms the approach that it

[136] NOPR at P 123.

articulated in the NOPR.[137] We share commenters' concerns regarding the potential for fill-in-the-blank standards to undermine uniformity. While uniformity is the goal with respect to Reliability Standards, we recognize that it may not be achievable overnight. Over time, we would expect that the regional differences will decline and uniform and best practices will develop. In Order No. 672, the Commission identified two instances where regional differences may be permitted, i.e., regional differences that are more stringent than continent-wide Reliability Standards (including those that address matters not addressed by a continent-wide Reliability Standard) and a regional difference necessitated by a physical difference in the Bulk-Power System.

299. The ERO should develop the needed information for the Commission to act on the fill-in-the-blank standards consistent with these criteria. If a regional difference is warranted, a regional fill-in-the-blank proposal must be developed through an approved regional Reliability Standards development process, and submitted to the ERO. If approved by the ERO, the ERO will then submit it to the Commission for approval.

300. The Commission disagrees with ISO-NE, ISO/RTO Council and APPA that 16 additional Reliability Standards should not be acted on or enforced at this time. The fact that a Reliability Standard simply references another, pending Reliability Standard, one that is not being approved or remanded here, does not alone justify not approving the former Reliability Standard. Rather, such a reference may be considered in an enforcement action, if relevant, but is not a reason to delay approval of enforcement of the Reliability Standard. We find that the Reliability Standards that reference a pending Reliability Standard contain the appropriate level of specificity necessary to provide notice to users, owners and operators of the Bulk-Power System as to what is required.

301. The Commission has reviewed the 16 Reliability Standards identified by commenters as referencing a Reliability Standard that the Commission proposed not to approve or remand. It appears that many of these Reliability Standards either refer to the process of collecting data or reference Requirements that entities are generally aware of because they have already been following these Reliability Standards on a voluntary basis. For example, MOD-012-0 requires transmission and generator owners to provide data to the regional reliability organization to support system modeling required by MOD-013-0. The NOPR proposed not to approve or remand MOD-013-0 partly because MOD-013-0 requires development of dynamics data requirements and reporting procedures that have not been submitted for our review. In addition, we proposed not to act on MOD-013-0 partly because it applies to a regional reliability organization and the Commission was not persuaded that a regional reliability organization's compliance with

[137] Id. at P 121 (footnote omitted).

a Reliability Standard can be enforced by NERC. That is not the case with MOD-012-0, which applies to entities that are clearly users, owners and operators of the Bulk-Power System. Although MOD-012-0 references MOD-013-0, its applicability to a subset of users, owners and operators is not at issue. Accordingly, the Commission denies the requests to leave pending this and similar data-related Reliability Standards and reaffirms the NOPR approach described above.

302. While EEI and others agree with the proposal that, in the interim, compliance with Reliability Standards for which the Commission needs additional information should continue as a matter of good utility practice, they caution that this should not lead to an alternative means of enforcement outside of section 215 of the FPA. In our Reliability Policy Statement, we explained that compliance with NERC Reliability Standards (or more stringent regional standards) is expected as a matter of good utility practice as that term is used in the pro forma OATT.[138] The Commission continues to expect compliance with such Reliability Standards as a matter of good utility practice. That being said, the Commission agrees that retaining a dual mechanism to enforce Reliability Standards both as good utility practice and under section 215 of the FPA is inappropriate; the OATT only applies to entities subject to our jurisdiction as public utilities under the FPA, while section 215 defines more broadly our jurisdiction with respect to mandatory Reliability Standards. We therefore do not intend to enforce, as an OATT violation, compliance with any Reliability Standard that has not been approved by the Commission under section 215.

303. With regard to California PUC's comments, we recognize the desire to retain certain existing regional standards that apply to the Western Interconnection, which are currently enforceable pursuant to WECC's RMS program. However, these regional Reliability Standards have not been submitted to the Commission by the ERO pursuant to the process set forth in Order No. 672. Accordingly, California PUC's concerns are beyond the scope of this proceeding. The Commission will review the WECC standards once they are approved by the ERO and submitted to the Commission for approval.

F. Discussion of Each Individual Reliability Standard

304. The NOPR reviewed each proposed Reliability Standard and provided an analysis by chapter according to the categories of Reliability Standards defined in NERC's petition. Each chapter began with an introduction to the category, followed by a

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[138] Policy Statement on Matters Related to Bulk Power System Reliability, 107 FERC ¶ 61,052 at P 23-26 (2004) (Reliability Policy Statement).

discussion of each proposed Reliability Standard. The Final Rule takes a similar approach.

1. BAL: Resource and Demand Balancing

305. The six Balancing (BAL) Reliability Standards address balancing resources and demand to maintain interconnection frequency within prescribed limits.

a. Real Power Balancing Control Performance (BAL-001-0)

306. The purpose of this Reliability Standard is to maintain Interconnection steady-state frequency within defined limits by balancing real power demand and supply in real-time. The proposed Reliability Standard would apply to balancing authorities. In the NOPR, the Commission proposed to approve BAL-001-0 as mandatory and enforceable.[139]

i. Comments

307. APPA agrees with the Commission that BAL-001-0 is sufficient for approval as a mandatory Reliability Standard.

ii. Commission Determination

308. For the reasons stated in the NOPR, the Commission approves BAL-001-0 as mandatory and enforceable.

b. Regional Difference to BAL-001-0: ERCOT Control Performance Standard 2

309. NERC approved a regional difference for ERCOT by allowing it to be exempt from Requirement R2 in BAL-001-0, which requires that the average area control error (ACE) for each of the six ten-minute periods during the hour must be within specific limits, and that a balancing authority achieve 90 percent compliance. This Requirement is referred to as Control Performance Standard 2 (CPS2).

310. NERC explains that ERCOT requested a waiver of CPS2 because: (1) ERCOT, as a single control area[140] asynchronously connected to the Eastern Interconnection, cannot

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[139] NOPR at P 136.

[140] At the time NERC granted this regional difference, the term "control area" was used instead of "balancing authority." For purposes of this discussion, they are the same.

create inadvertent flows or time errors in other control areas and (2) CPS2 may not be feasible under ERCOT's competitive balancing energy market. In support of this argument, ERCOT cites to a study that it performed showing that under the new market structure, the ten control areas in its region individually were able to meet CPS2 standards while the aggregate performance of the ten control areas was not in compliance. Since requesting the waiver from CPS2, ERCOT has adopted section 5 of the ERCOT protocols which identify the necessary frequency controls needed for reliable operation in ERCOT.

311. In the NOPR, the Commission proposed to approve the ERCOT regional difference and have the ERO submit a modification of the ERCOT regional difference to include the requirements concerning frequency response contained in section five of the ERCOT protocols.[141]

i. Comments

312. No comments were filed on this regional difference.

ii. Commission Determination

313. The Commission approves the ERCOT regional difference as mandatory and enforceable. Order No. 672 explains that "uniformity of Reliability Standards should be the goal and the practice, the rule rather than the exception."[142] However, the Commission has stated that, as a general matter, regional differences are permissible if they are either more stringent than the continent-wide Reliability Standard, or if they are necessitated by a physical difference in the Bulk-Power System.[143] Regional differences must still be just, reasonable, not unduly discriminatory or preferential and in the public interest.[144]

314. The Commission finds that ERCOT's approach under section 5 of the ERCOT protocols appears to be a more stringent practice than Requirement R2 in BAL-001-0 and therefore approves the regional difference.

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[141] Id. at P 143.

[142] Order No. 672 at P 290.

[143] Id. at P 291.

[144] Id.

315. As proposed in the NOPR, the Commission directs the ERO to file a modification of the ERCOT regional difference to include the requirements concerning frequency response contained in section 5 of the ERCOT protocols. As with other new regional differences, the Commission expects that the ERCOT regional difference will include Requirements, Measures and Levels of Non-Compliance sections.

c. Disturbance Control Performance (BAL-002-0)

316. The stated purpose of this Reliability Standard is to use contingency reserves to balance resources and demand to return Interconnection frequency to within defined limits following a reportable disturbance. The proposed Reliability Standard would apply to balancing authorities, reserve sharing groups[145] and regional reliability organizations.

317. In the NOPR, the Commission proposed to approve Reliability Standard BAL-002-0 as mandatory and enforceable.[146] In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission proposed to direct NERC to submit a modification to BAL-002-0 that: (1) includes a Requirement that explicitly allows demand-side management (DSM) to be used as a resource for contingency reserves; (2) develops a continent-wide contingency reserve policy;[147] (3) includes a Requirement that measures response for any event or contingency that causes a frequency deviation;[148] (4) substitutes the ERO for the regional reliability organization as the compliance monitor and (5) refers to the ERO rather than the NERC Operating Committee in Requirements R4.2 and R6.2.

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[145] A "reserve sharing group" is a group of two or more balancing authorities that collectively maintain, allocate and supply operating reserves. See NERC Glossary at 15.

[146] NOPR at P 151.

[147] The NOPR explained that this could be accomplished by modifying Requirement R2 or developing a new Reliability Standard.

[148] This proposed Requirement addressed modifications to Requirement R3.1 which are described in the "Disturbance Control Standard and the Associated Reserve Requirement" section of this Final Rule.

i. General Comments

318. Constellation supports the Commission's proposals with respect to BAL-002-0.

319. Xcel notes that this Reliability Standard would apply to a reserve sharing group, which is not defined in the NERC Functional Model but generally consists of a group of separate entities. Xcel states it is not clear how compliance and penalties would be applied to a reserve sharing group and seeks clarification from the Commission. As a second concern, Xcel states it is not clear who calculates ACE between a balancing authority and a reserve sharing group and states that the Commission should require the ERO to clarify this issue when modifying the Reliability Standard.

ii. Commission Determination

320. The Commission approves BAL-002-0. With regard to Xcel's concern, the NERC glossary defines a reserve sharing group as "two or more balancing authorities that collectively maintain, allocate, and supply operating reserves required for each balancing authority's use in recovering from contingencies within the group."[149] The Commission notes that the Reliability Standard's Requirements and Levels of Non-Compliance are applicable to both balancing authorities and reserve sharing groups and are clear as to the roles and responsibilities of these entities. The ERO will be responsible for ensuring compliance with this Reliability Standard for all applicable entities. A reserve sharing group, however, as an independent organization, is able to determine on its own as a commercial matter whether any penalties related to non-compliance should be re-apportioned among the members of the group. With regard to Xcel's concern about which entity calculates ACE, it is not clear from Xcel's comments what it believes needs clarification. In general, we understand that all balancing authorities are required to calculate ACE with the exception of balancing authorities that use dynamic schedules to provide all regulating reserves from another balancing authority. As such, reserve sharing groups will not calculate ACE; they will rely on balancing authorities to do so.

321. The Commission adopts the NOPR's proposal to require the ERO to develop a modification to the Reliability Standard that refers to the ERO rather than to the NERC Operating Committee in Requirements R4.2 and R6.2. The ERO has the responsibility to assure the reliability of the Bulk-Power System and should be the entity that modifies the Disturbance Recovery Period as necessary. As identified in the Applicability Issues section, the Commission directs the ERO to modify this Reliability Standard to substitute

[149] NERC Glossary at 15.

Regional Entity for regional reliability organization as the compliance monitor.[150] The remaining modifications to this Reliability Standard proposed in the NOPR are discussed below.

iii. Including Demand-Side Management as a Resource

(a) Comments

322. SMA supports the Commission's proposed requirement explicitly allowing demand-side response as a resource and agrees with the Commission that DSM and direct load control should be considered on the same basis as conventional generation or any other technology with respect to contingency reserves. SMA states that nationwide its members provide over 1,300 MW of demand that is curtailable on 10 minutes notice or less and indicates that most of this curtailable capacity is committed to utilities pursuant to retail tariffs or contracts for operating reserves.

323. FirstEnergy states that demand-side resources should be included as another tool for the balancing authority to use in meeting the control performance and disturbance control standards. According to FirstEnergy, demand-side resources should mimic the requirements of generation resources but with a decrease in load rather than an increase in generation response.

324. Process Electricity Committee generally supports the proposal to treat demand response resources in a manner similar to conventional generation so long as such demand resources participate in such DSM programs voluntarily and comply with all applicable Reliability Standards and requirements. Process Electricity Committee recommends that the Commission modify its proposal to clarify that any such demand response resources may be used only with the end-user's express written agreement pursuant to clear contractual rights and obligations.

325. NY Major Consumers states that many large end use customers currently have the ability to provide all ancillary services, or are capable of providing these services in the near future and that this capability has been recognized by Commission staff in Docket No. AD06-2-000, Assessment of Demand Response Resources. NY Major Consumers further states that there remains some ambiguity in the proposed Reliability Standards as to the eligibility of technically-qualified loads to provide these services and requests that

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[150] See Applicability Issues: Regional Reliability Organizations, supra section II.C.5. This directive applies generically to all Reliability Standards that identify the regional reliability organization as the compliance monitor.

the Commission eliminate any such uncertainty and amend the proposed Reliability Standards as further described in its comments.

326. Some commenters[151] disagree with the Commission's proposal to add a requirement explicitly allowing DSM as a resource for contingency reserves. NERC, APPA and ISO-NE state that this requirement is too prescriptive. NERC maintains that explicitly allowing DSM goes well beyond the bounds of current utility practice and suggests an improved directive would simply place DSM on the same basis as other resources. APPA states that DSM resources should be included as an option for a balancing authority to use in meeting its reserve obligations, but that the Commission should not require NERC to modify the Reliability Standard to explicitly identify DSM or any other type of capacity as a resource for meeting reserve contingencies.

327. In addition, ISO-NE states that DSM, to which it has access, responds to capacity requirements and may not provide relief on a contingency basis, but states that it has a limited number of resources that could meet this requirement. SDG&E argues that DSM participation in real-time is often unknown in comparison to conventional generation and further states that the NOPR does not explain how DSM could be used in real-time dispatch. Further, SDG&E maintains that the Commission has not established a clear and workable definition of DSM.

328. MISO states that it is not clear about the meaning and questions the value of the Commission's proposed requirement to include DSM as a contingency reserve resource.[152]

329. While EEI and MRO do not disagree with the Commission's proposed requirement to include DSM, EEI states that both generation and controllable load should comply with the same requirements to the maximum extent possible, while MRO suggests that this requirement should also include study and testing requirements.

(b) Commission Determination

330. We direct the ERO to submit a modification to BAL-002-0 that includes a Requirement that explicitly provides that DSM may be used as a resource for contingency reserves, subject to the clarifications provided below.

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[151] See NERC, ISO-NE, APPA and SDG&E.

[152] MISO-PJM comments jointly with respect to IRO-006-3 only.

331. The Commission disagrees with APPA that we should not explicitly identify any type of capacity as a resource for meeting reserve contingencies. The Commission believes that listing the types of resources that can be used to meet contingency reserves makes the Reliability Standard clearer, provides users, owners and operators of the Bulk-Power System a set of options to meet contingency reserves, and treats DSM on a comparable basis with other resources.

332. Many commenters argue that the Commission's proposed directive that would explicitly allow DSM as a resource for contingency reserves is too prescriptive. Concerns in this area generally fall into three categories: (1) that DSM should be treated on a comparable basis as other resources; (2) that the Reliability Standard should be based on meeting an objective as opposed to stating how that objective is met and (3) that DSM may not be technically capable of providing this service.

333. With regard to the first concern, the Commission clarifies that the purpose of the proposed directive is to ensure comparable treatment of DSM with conventional generation or any other technology and to allow DSM to be considered as a resource for contingency reserves on this basis without requiring the use of any particular contingency reserve option.[153] The proposed directive as written achieves that goal. With regard to the second concern, we believe that this Reliability Standard is objective-based and we reiterate that we are simply attempting to make it inclusive of other technologies that may be able to provide contingency reserves, and are not directing the use of any particular type of resource. By specifying DSM as a potential resource for contingency reserves, the Commission is clarifying the substance of the Reliability Standard.[154]

334. With regard to commenters' concern that DSM may not be technically possible, we first clarify that in order for DSM to participate, it must be technically capable of providing contingency reserve service. We expect that the ERO would determine what technical requirements DSM would need to meet to provide contingency reserves.[155] While ISO-NE, APPA and SDG&E suggest that there is limited access to qualified DSM or that DSM may not be optimal from a technical standpoint, we note that SMA's comments state that its members are currently providing over 1,300 MW of contingency reserve service through retail tariffs or contracts. Alcoa states that it could use the digital

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[153] NOPR at P 157.

[154] Order No. 672 at P 260.

[155] Id. ("We leave it to the ERO to develop proposed Reliability Standards that appropriately balance reliability principles and implementation features.")

controls of its aluminum smelters to provide load control that would be superior to conventional generation in terms of ramp rate and speed of response. Also, the Commission notes that New Zealand is currently using DSM for contingency reserves.[156] Nonetheless, our requirement is that BAL-002-0 explicitly provides that demand resources may be used as a resource for contingency reserves without requiring the use of a specific resource or type of resource.

335. Accordingly, the Commission directs the ERO to explicitly allow DSM as a resource for contingency reserves, and clarifies that DSM should be treated on a comparable basis and must meet similar technical requirements as other resources providing this service.[157]

iv. Continent-Wide Contingency Reserve Policy

(a) Comments

336. The Commission proposed in the NOPR to direct the ERO to develop one uniform continent-wide contingency reserves policy. Specifically, the Commission noted that the appropriate mix of operating reserves, spinning reserves and non-spinning reserves should be addressed on a consistent basis and consideration should be given to the amount of frequency response from generation or load needed to assure reliability. The Commission proposed that this policy be neutral as to the source of the contingency reserves in terms of ownership or technology.

337. SMA supports the Commission's proposal to develop a continent-wide contingency reserve policy and agrees with the Commission that the policy should be neutral as to the source of the contingency reserves in terms of ownership or technology. EEI and FirstEnergy both support development of a continent-wide contingency reserve policy but suggest the need for regional variations across the Bulk-Power System. For instance, FirstEnergy suggests that a one percent peak load spinning requirement in the Eastern Interconnection could be the equivalent of a two percent spinning requirement in the Western Interconnection.

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[156] See http://www.electricitycommission.govt.nz/pdfs/rulesandregs/rules/rulespdf/Part-C-sched-C5-1Dec06.pdf.

[157] ERCOT presently uses "Load Acting as a Resource" as part of its reserves which are triggered at a specified frequency. This is similar to but not the same as generation and is an example of how load can perform as a resource.

338. Other commenters[158] disagree with the Commission's proposal to have NERC develop a continent-wide contingency reserve policy and instead support an Interconnection-wide or regional approach. APPA, LPPC and MISO state that a continent-wide policy would not work because of regional differences such as size, topology, mix of resources and likely contingencies. While APPA supports the Commission's proposal that contingency reserves should be based on the reliability risk of a balancing authority not meeting load, it favors an Interconnection-wide approach. MISO suggests that defining certain terms such as "spinning," "non-spinning," "contingency" and "replacement" and having common calculations would be of value. It contends, however, that EPAct does not apply to resource adequacy requirements, implying that the Commission therefore is prevented from directing the development of a continent-wide contingency reserve policy. International Transmission shares this view.

339. California PUC states that some customers can tolerate a limited number of outages and suggests that it may be more cost-effective to provide back-up power to customers with high reliability needs rather than designing the entire system to a very high and expensive level. California PUC disagrees with the Commission that contingency reserves should be based only on the reliability risk of a balancing authority not meeting load. It suggests that certain other relevant factors should be considered, such as the number of customers or MW lost, the value that customers in a certain area place on reliability and the costs of avoiding outages (the cost of reserves).

(b) Commission Determination

340. We direct the ERO to submit a modification to BAL-002-0 to include a continent-wide contingency reserve policy. We are not prescribing the details of that policy. As the Commission stated in the NOPR, "[w]hile the Commission believes it is appropriate for balancing authorities to have different amounts of contingency reserves, these amounts should be based on one uniform continent-wide contingency reserves policy. The policy should be based on the reliability risk of not meeting load associated with a particular balancing authority's generation mix and topology."[159] In addition, the contingency reserves should include sufficient frequency responsive resources such that the net frequency response of the balancing authority is sufficient for either

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[158] See APPA, International Transmission, MISO-PJM, LPPC and California PUC.

[159] NOPR at P 156.

interconnected or isolated operation.[160] The Commission agrees with MISO that certain terms such as "spinning" and "non-spinning" or any other term used to describe contingency or operating reserves could be developed continent-wide. Additionally, we believe the technical requirements for resources that provide contingency reserves should not change from region to region.

341. We believe a continent-wide contingency reserves policy would assure that there are adequate magnitude and frequency responsive contingency reserves in each balancing authority. This will improve performance so that no balancing authority will be doing less than its fair share.

342. With regard to California PUC's concerns regarding the cost of providing reserves, and the suggestion that loss of firm load may be an acceptable alternative to enhanced reliability of the system, the Commission disagrees. Loss of firm load should not be permitted in planning the system for a single contingency. However, the Commission recognizes the appropriate concern of California PUC regarding costs. The California PUC can have a strong role in this area by encouraging or requiring DSM programs that can reduce the demand on the transmission system.

343. With regard to statements that EPAct does not apply to resource adequacy, we note that this Reliability Standard does not concern resource adequacy, but addresses contingency reserves, which are operating and not planning reserves. Operating reserves are not the same as resource adequacy, a planning element. Section 215 authorizes the Commission to approve Reliability Standards for contingency reserves because they are necessary for real-time Reliable Operation of the Bulk-Power System.

344. Accordingly, the Commission requires the ERO to develop a continent-wide contingency reserve policy through the Reliability Standards development process, which should include uniform elements such as certain definitions and requirements as discussed in this section. The Commission clarifies that the continent-wide policy can allow for regional differences pursuant to Order No. 672, but that the policy should include procedures to determine the appropriate mix of operating reserves, spinning and non-spinning, as well as requirements pertaining to the specific amounts of operating reserves based on the load characteristics and magnitude, topology, and mix of resources available in the region.

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[160] Although Frequency Response and Bias are discussed at length in Reliability Standard BAL-003-0, the Commission notes here that it is important that contingency reserves have adequate frequency response to assure recovery immediately following an incident.

v. Disturbance Control Standard and the Associated Reserve Requirement

(a) Comments

345. The Commission identified two items in the Disturbance Control Standard section of the NOPR. In the first item, the Commission agreed with the interpretation that the 15 minute limit on a reportable disturbance was "absolute, objective, and measurable" and therefore enforceable in the present Reliability Standard. The second item resulted in a proposal to modify Requirement R3.1, which currently requires that a balancing authority to carry at least enough contingency reserves to cover "the most severe single contingency." The Commission proposed to change the Requirement to include enough contingency reserves to cover any event or single contingency, including a transmission outage, which results in a significant deviation in frequency from the loss or mismatch of supply either from local generation or imports. The Commission noted that this approach would address staff's concern with Requirement R3.1—specifically, addressing the ambiguity over whether the Requirement meant the loss of generation or the loss of supply resulting from a transmission or generation contingency.[161]

346. Most commenters[162] express concern over the Commission's proposal to add a Requirement that measures response for any event or contingency that causes a frequency deviation. NERC states that this proposed directive is overly prescriptive and suggests that an improved modification would be to direct the ERO to resolve the ambiguity in Requirement R3.1 as pointed out in the Staff Preliminary Assessment. APPA suggests that the Commission should not require NERC to modify the Reliability Standard, but should allow NERC to address the Commission's concerns in its Reliability Standards development process and, while doing so, NERC should consider defining "Most Severe Single Contingency" contained in the WECC Frequency Response Standard White Paper.[163] Xcel has concerns about the compliance aspects of this proposed modification stating that there is no equitable method to assess an individual entity's performance for an occurrence that is potentially Interconnection-wide.

347. NRC notes the NERC and Commission observations regarding the declining trend in frequency response and states that this Reliability Standard provides the opportunity to

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[161] NOPR at P 153.

[162] See NERC, APPA, Xcel, MRO, ISO-NE, EEI and Nevada Companies.

[163] See NOPR at n.116.

establish a frequency response performance standard. NRC staff suggests that a Measure be added to establish a frequency response.

348. MRO suggests that, if this requirement is adopted, a clear definition of the event that causes a frequency deviation will be required. ISO-NE comments that Requirement R3.1 is already clear and the suggested modification is not clear because: (1) it is not possible to plan for all such events and (2) it is not clear what is a "significant deviation." EEI states that a requirement to measure frequency response for any event or contingency could provide beneficial information for system operators but states that there is presently no requirement for generators to report all outages so measurements cannot be made. EEI further states that the compliance costs of this requirement may outweigh the benefits. The Nevada Companies disagree with the proposed modification and state that the Reliability Standard must instead focus strictly on the loss of supply. The Nevada Companies further state that, for purposes of this Reliability Standard, WECC's present contingency reserve criterion, which requires consideration of loss of generation that would result from the most severe single contingency, is most applicable.

349. Georgia Operators comment that the Commission's intent in this proposed modification should not be interpreted to require a balancing authority to carry enough reserves to cover any event resulting in a significant deviation in frequency and should not be read to suggest that frequency rather than ACE should be used to measure a balancing authority's deployment of reserves for contingencies.

350. MISO and ERCOT comment on the Commission's suggestion that NERC should consider defining a frequency deviation of 20 milli Hertz lasting longer than the 15 minute recovery period as a significant deviation. MISO argues that the value could vary in different Interconnections and believes the current method is acceptable. ERCOT states that it is not feasible to apply a single frequency-deviation number to ERCOT and the other Interconnections and asks the Commission to instead consider a Reliability Standard that is proportional to the size of each Interconnection. ERCOT notes that 20 milli Hertz would be far more strict than ERCOT's historic frequency performance.

(b) Commission Determination

351. On this issue, the Commission will not direct the ERO to modify BAL-002-0 in the manner proposed in the NOPR. Rather, the Commission directs the ERO to address the concerns expressed by the Commission about having enough contingency reserves to respond to an event on the system in Requirement R3.1 and how such reserves are measured. The ERO should address this through adoption or modification of Requirements and metrics in the Reliability Standards development process.

352. NERC correctly points out that the Commission's proposal on this point stemmed from the ambiguity in Requirement R3.1 that Commission staff highlighted in the Staff Preliminary Assessment. Requirement R3.1 currently requires that a balancing authority carry at least enough contingency reserves to cover "the most severe single contingency." The Commission emphasizes that the goal of this Reliability Standard is to insure against the reliability risk of not serving load by matching generation and load following any disturbance or event that results in a significant deviation in frequency. Consistent with this goal, the Commission believes that this Reliability Standard should be inclusive of all events, i.e., loss of supply, loss of load or significant scheduling problems, which can cause frequency disturbances and should address how balancing authorities should respond. The Commission notes that PJM recently issued a paper addressing frequency excursion related to scheduling problems.[164]

353. In the NOPR, the Commission identified two concerns in the Disturbance Control Standard section of BAL-002-0. The first discussed NERC's comment that the Reliability Standard is "absolute, objective, and measurable" because it allows up to 15 minutes for the recovery from a reportable disturbance,[165] and second, the Commission asked whether a frequency deviation of 20 milli Hertz lasting longer than the 15 minute recovery period should be used to define a significant deviation in frequency.[166] No commenters address the first concern but many commented on the second.

354. First, the Commission directs the ERO to develop a modification to the Reliability Standard requiring that any single reportable disturbance that has a recovery time of 15 minutes or longer be reported as a violation of the Disturbance Control Standard. This is consistent with our position in the NOPR and NERC's position in response to the Staff Preliminary Assessment of the Requirements in BAL-002-0, and was not disputed or commented upon by any NOPR commenters.

355. Taking into account commenters' concerns about defining a significant deviation as a frequency deviation of 20 milli Hertz lasting longer than the 15 minute recovery period, the Commission will not direct a specific change. Instead, we direct the ERO, through the Reliability Standards development process, to modify this Reliability Standard to define a significant deviation and a reportable event, taking into account all events that have an impact on frequency, e.g., loss of supply, loss of load and significant

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[164] Id. at n.134.

[165] NERC Comments on the Staff Preliminary Assessment at 41.

[166] NOPR at P 153.

scheduling problems, which can cause frequency disturbances and to address how balancing authorities should respond. As suggested by NRC, this or a related Reliability Standard should also include a frequency response requirement. The present Control Performance Standards represent the monthly and yearly averages which are appropriate for measuring long-term trends but may not be appropriate for measuring short-term events. In addition, the measures should be available to the balancing authorities to assist in real-time operations.[167]

vi. Summary of Commission Determination

356. The Commission approves Reliability Standard BAL-002-0 as mandatory and enforceable. In addition, the Commission directs the ERO to develop a modification to BAL-002-0 through the Reliability Standards development process that: (1) includes a Requirement that explicitly provides that DSM may be used as a resource for contingency reserves; (2) develops a continent-wide contingency reserve policy;[168] and (3) refers to the ERO rather than the NERC Operating Committee in Requirements R4.2 and R6.2. In addition, the Commission directs the ERO to modify the Reliability Standard in a manner that recognizes the loss of transmission as well as generation, thereby providing a realistic simulation of possible events that might affect the contingency reserves.

d. Frequency Response and Bias (BAL-003-0)

357. The purpose of BAL-003-0 is to ensure that a balancing authority's frequency bias setting[169] is accurately calculated to match its actual frequency response.[170] In the NOPR,

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[167] It is the Commission's understanding that the Balancing Authority ACE Limit Standards that are currently being field tested are triggered on frequency deviations and can be used as feedback to the real-time operations personnel.

[168] This could be accomplished by modifying Requirement R2 or developing a new Reliability Standard.

[169] Frequency bias setting is a value expressed in MW/0.1 Hz, set into a balancing authority ACE algorithm, which allows the balancing authority to contribute its frequency response to the Interconnection. See NERC glossary at 7.

[170] The actual frequency response is the increase in output from generators after the loss of a generator and determines the frequency at which generation and load return to balance.

the Commission proposed to approve Reliability Standard BAL-003-0 as mandatory and enforceable. In addition, pursuant to section 215(d) of the FPA and § 39.5(f) of our regulations, the Commission proposed to direct NERC to submit a modification to BAL-003-0 that: (1) includes Levels of Non-Compliance and (2) modifies Measure M1 to include yearly surveys of frequency response.[171]

358. The Commission further requested comments on whether BAL-003-0 appropriately addresses frequency bias setting during normal as well as emergency conditions and whether a requirement should be added for balancing authorities to calculate the frequency response necessary for reliability in each of the Interconnections and identify a method of obtaining that frequency response from a combination of generation and load resources.[172]

i. Comments

359. Several commenters address the Commission's proposal to direct the ERO to modify Measurement M1 to include yearly surveys.

360. LPPC agrees with the Commission's proposed directive. EEI states that NERC currently conducts an annual frequency response characteristic survey that appears to address the Commission's proposed directive. If the yearly survey would replace the frequency response characteristic survey, EEI states that the survey should include questions regarding the scope of potential new requirements. ISO/RTO Council believes that yearly surveys are unnecessary and would prefer that NERC focus on surveying balancing authority responses to large frequency disturbances.

361. APPA agrees that the Commission has correctly identified shortcomings in this Reliability Standard and states that, while the Commission may have identified appropriate modifications, the determination should be left to NERC to address in the first instance. APPA supports the development of a consistent Interconnection-wide policy and suggests that NERC should consider procedures similar to those used in ERCOT and WECC.

362. FirstEnergy suggests that Requirements R5 and R5.1 of this Reliability Standard should be required in lieu of Requirement R2 if a balancing authority has load but no generation (R5) or if a balancing authority has generation but no load (R5.1).

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[171] NOPR at P 177.

[172] Id. at P 175.

FirstEnergy states that without this change the Reliability Standard is not clear because it implies that a balancing authority could choose between two options. Most commenters responded to the Commission's request for comments in the NOPR by stating that additional requirements do not need to be added for balancing authorities to calculate the frequency response necessary for reliability in each of the Interconnections. NERC states that frequency bias is currently over-compensated across the Interconnections and that requiring frequency bias to be actual frequency response may reduce control performance. Additionally, NERC states that some studies have shown a decline in frequency (e.g., governor) response over several decades and that it is addressing this issue through the request for a new Reliability Standard on frequency response. NERC also notes that BAL-003-0 will be replaced soon by the new balancing Reliability Standards that are approaching ballot.

363. In general, EEI believes that systemic over-biasing does not present a reliability problem and the Commission should exercise caution in requesting changes to this Reliability Standard. EEI states that the frequency bias varies continuously in terms of the type and magnitude of load changes, and the types and loading of generation resources. Therefore, EEI suggests that the accuracy of any estimate of frequency bias is highly questionable. Further, EEI states that the one percent default value was deliberately set to over-bias the system to ensure adequate frequency response. EEI is unaware of any evidence of undamped oscillations due to this over-biasing and states that the one percent floor should be recognized by the Commission as just and reasonable until an optimum frequency bias value can be studied. EEI sees the potential need for developing requirements for modifying frequency bias during emergency conditions, citing evidence from the August 2003 blackout suggesting that oscillations following the ISO New England separation from the Eastern Interconnection may have been caused by over-biasing.

364. ISO/RTO Council comments that the details of the procedures that are used to ensure frequency bias are appropriate and no additional requirements for balancing authorities are needed. It disagrees with the Commission's proposal to develop uniform requirements for frequency bias.[173] ISO/RTO Council states that there is no single right way to develop and apply a frequency bias setting and no universally accepted norm. ISO/RTO Council believes the key point is that the frequency bias setting be greater than the natural frequency response of the system and believes that the percent minimum currently in place is sufficient. ISO/RTO Council recommends that NERC investigate (1) reliability issues associated with low natural response; (2) causes of decreasing

[173] See id. at P 129.

natural response and (3) possible opportunities for creating markets for load and generator response to frequency changes.

365. Xcel responds that there is no need for this Reliability Standard to address frequency bias during black start, restoration and islanding due to the transitional nature of those events. Northern Indiana opposes imposing greater restrictions on frequency bias and frequency response calculations, stating that they could be counter-productive by making procedural errors more likely, which could harm reliability. Northern Indiana suggests that the approach suggested in the NOPR would require frequency response to be calculated based on various contingencies in a way that, if a particular contingency does not occur, the balancing authority might contribute to an incorrect frequency response. Northern Indiana maintains that the existing Reliability Standard is appropriate because it reflects the unique characteristics of each utility's operating characteristics and allows experienced, certified operators to act to avoid adverse effects on the electric system.

366. MidAmerican believes that a requirement for balancing authorities to calculate the necessary frequency response is not necessary for reliability, nor should balancing authorities be required to identify the method to obtain that frequency response. MidAmerican states that the bias settings addressed in BAL-003-0 are appropriate for normal and emergency conditions. It further explains that large disturbances resulting in large frequency shifts can only be corrected by bringing load and generation into balance. MidAmerican further states that the annual review of bias settings uses tie line and frequency deviations during large disturbances to provide bias settings representative of relatively large frequency excursions and adds that these settings, along with automatic generation control and governor response, provide an over-biased response to steady-state frequency deviations. MidAmerican states that as long as system disturbances are continually tracked to ensure frequency decay is sufficiently mitigated, enough frequency bias will be on the system and the current Reliability Standard can be considered sufficient.

367. MISO states that it expects the Commission's concerns with the frequency response and bias standard to be addressed in NERC's frequency response Reliability Standard Authorization Request.

ii. Commission Determination

368. The Commission approves Reliability Standard BAL-003-0 as mandatory and enforceable. In addition, the Commission directs the ERO to develop a modification to BAL-003-0 as discussed below.

369. With respect to the frequency of frequency response surveys, EEI states that NERC currently conducts an annual frequency response characteristic survey that appears to address the Commission's concern. The Commission disagrees. The surveys that were performed on a yearly basis are not available on NERC's website and the ISO/RTO Council believes that more frequent analysis after large frequency disturbances is appropriate. The Commission understands that the last analysis was performed in 2002. Currently, Measure M1 only requires balancing authorities to perform surveys when requested by the NERC operating committee. As identified in Order No. 672, the Reliability Standards should be based on actual data.[174] Therefore, on further consideration, instead of requiring yearly surveys as proposed in the NOPR, the Commission believes that the frequency of these surveys should be based on the data requirements that will assist the ERO to determine if the balancing authorities are providing adequate and equitable frequency response to disturbances on the Bulk-Power System. Accordingly, we direct the ERO to determine the optimal periodicity of frequency response surveys necessary to ensure that Requirement R2 and other Requirements of the Reliability Standard are being met and to modify Measure M1 based on this determination.[175]

370. With respect to FirstEnergy's comment, Requirement R2 states that the frequency bias setting should be as close as practical to, or greater than, the balancing authority's frequency response. That is the Requirement concerning the relationship between frequency response and frequency bias, with Requirement R5 and R5.1 providing minimum frequency bias values for specific types of balancing authorities. The three Requirements do not conflict. A balancing authority must use a frequency bias of at least one percent and they must have a frequency bias that is as close as practical to, or greater than, the balancing authority's actual frequency response. As will be discussed more fully below, the Commission expects each balancing authority to meet these Requirements to be in compliance with the existing BAL-003-0.

371. With respect to the Commission's request for comments, most commenters are opposed to additional requirements for balancing authorities to calculate the frequency response necessary for reliability in each of the Interconnections. NERC states that frequency bias is currently over-compensated across the Interconnections, while EEI states that the one percent default value was deliberately set to over-bias the system to

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[174] Order No. 672 at P 324.

[175] As input to the Reliability Standards development process, the Commission suggests that the ERO perform sufficient analysis to understand how the frequency response varies between balancing authorities and Interconnections.

ensure adequate Frequency Response. The ISO/RTO Council comments that frequency bias settings are appropriate and all agree that no additional requirements are needed. However, NERC acknowledges that the frequency response of the Eastern and Western Interconnection is decreasing and states it will address the issue with a new frequency response Reliability Standard. There is no similar need in ERCOT because ERCOT has adopted an approach to calculate the necessary frequency response needed for Reliable Operation and has identified a method of obtaining the necessary frequency response as discussed in BAL-001-0 regional difference. The Commission understands that this approach was based on lessons learned from the May 15, 2003 event[176] that resulted in larger than anticipated amounts of firm load shedding by underfrequency relays operation due to less than desirable amounts of frequency response.

372. The Commission is not persuaded by the commenters. We conclude that the minimum frequency response needed for Reliable Operation should be defined and methods of obtaining the frequency response identified. In addition to the ERCOT experience, EEI provides an additional example that underscores the Commission's concern in this area with its discussion of the ISO-NE frequency oscillations resulting from the August 14, 2003 blackout. Severe oscillations were observed in the ISO-NE frequency when it separated from the Eastern Interconnection during the August 14, 2003 blackout.[177] The ISO-NE operators acted quickly to reduce the bias setting so as to eliminate the self-induced frequency oscillations before they affected system reliability. This apparent mismatch between the bias and the actual frequency response might have caused the ISO-NE system to cascade if it had not been for the quick actions of its operators. Therefore, we direct the ERO to either modify this Reliability Standard or develop a new Reliability Standard that defines the necessary amount of frequency response needed for Reliable Operation and methods of obtaining and measuring that frequency response is available.

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[176] See Underfrequency Load Shedding 2006 Assessment and Review by ERCOT Dynamics Working Group, available at http://www.ercot.com/meetings/ros/keydocs/2007/0111/10a._DWG_2006_UFLS_Assessment_12-18-06.doc.

[177] See Performance of the New England and Maritimes Power Systems During the August 14, 2003 Blackout by Independent System Operator New England, available at https://www.npcc.org/publicFiles/blackout/archives/Restoration_of_the_NPCC_Areas.pdf.

373. As the Commission noted in the NOPR and in our response to FirstEnergy, Requirement R2 of this Reliability Standard states that "[e]ach Balancing Authority shall establish and maintain a Frequency Bias Setting that is as close as practical to, or greater than, the Balancing Authority's Frequency Response." The Commission believes that the achievement of this Requirement is fundamental to the tie line bias control schemes that have been in use to assist in balancing generation and load in the Interconnections for many years.[178] We understand that the present Reliability Standard sets the required frequency response of the balancing authorities to be approximately one percent or greater by requiring that the frequency bias shall not be less than one percent and that the frequency bias be as close as practical to, or greater than, the actual frequency response.

374. While EEI supports additional requirements related to frequency bias during emergency conditions, Xcel states that frequency response during black start, restoration and islanding situations need not be addressed in a Reliability Standard due to the transient nature of these events. The Commission disagrees with Xcel and agrees with EEI. The Bulk-Power System should be operated in a reliable manner at all times.

375. Accordingly, the Commission approves Reliability Standard BAL-003-0 as mandatory and enforceable. In addition, the Commission directs the ERO to develop a modification to BAL-003-0 through the Reliability Standards development process that: (1) includes Levels of Non-Compliance; (2) determines the appropriate periodicity of frequency response surveys necessary to ensure that Requirement R2 and other requirements of the Reliability Standard are being met, and to modify Measure M1 based on that determination and (3) defines the necessary amount of Frequency Response needed for Reliable Operation for each balancing authority with methods of obtaining and measuring that the frequency response is achieved.

e. Time Error Correction (BAL-004-0)

376. The purpose of BAL-004-0 is to ensure that time error corrections are conducted in a manner that does not adversely affect the reliability of the Interconnection.[179] In the NOPR, the Commission proposed to approve Reliability Standard BAL-004-0 as

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[178] Cohn, Nathan, Control of Generation and Power Flow on Interconnected Systems, (John Wiley and Sons 1966).

[179] The NERC glossary defines "time error correction" as "an offset to the Interconnection's scheduled frequency to return the Interconnection Time Error to a predetermined value." NERC Glossary at 18. Time error is caused by the accumulation of frequency error over a given period.

mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission proposed to direct that NERC submit a modification to BAL-004-0 that includes Levels of Non-Compliance and additional Measures.[180]

377. Further, the Commission noted that WECC has implemented an automatic time error correction procedure[181] that, according to data on the NERC website, is more effective in minimizing both time error corrections and inadvertent interchange.[182] The NOPR asked for comment on whether the Commission should require NERC to adopt Requirements similar to those in the WECC automatic time error correction procedure.

i. Comments

378. MISO states that it is unclear what the Commission had in mind with its proposed directive to include Levels of Non-Compliance and additional Measures and that the reliability benefit of such Levels of Non-Compliance and additional Measures is also unclear.

379. While APPA and EEI favor adopting the WECC approach to time error correction, NERC and the majority of other commenters[183] are either opposed to adopting the WECC automatic time error correction procedure in other regions or think time error correction is more appropriately addressed as a business practice. NERC notes that the WECC procedure is in lieu of an equivalent procedure contained within the business practices of the North American Energy Standards Board (NAESB) and suggests that instructions for implementing a time error correction are more appropriately addressed as a business practice. Northern Indiana maintains that WECC-type procedures are unnecessary, and could result in unintended process errors or operational problems. It urges the Commission to allow time error issues to remain within the jurisdiction of NAESB and suggests that time error correction is not essential to reliability and is more appropriately

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[180] NOPR at P 184.

[181] See http://www.wecc.biz/documents/library/procedures/Time_Error_Procedure_10-04-02.pdf.

[182] See http://www.nerc.com/~filez/inadv.html (regarding inadvertent interchange data) and http://www.nerc.com/~filez/timerror.html (regarding time error correction).

[183] See Xcel, Northern Indiana, ISO-NE, LPPC and MISO-PJM.

treated as a non-essential guide. ISO-NE agrees that time error correction is not a reliability issue.

380. Xcel states that its operating company located in WECC has experienced problems with WECC's automatic time error correction procedure and therefore does not support adoption of this procedure by other regions. In addition, Xcel states that time error correction is not necessary for utilities in regional markets where imbalances are settled financially and the regional market operator manages the scheduled interchange offsets. LPPC suggests that there is not enough evidence to show that WECC's time error correction procedure is appropriate for the Eastern Interconnection. LPPC adds that the choice of switching to the WECC procedure should be left up to the NERC Reliability Standards development process.

381. MISO states that, while the WECC procedure has advantages with regard to reducing inadvertent interchange values, it does not reduce the number of time error corrections because WECC monitors and performs time error correction on a shorter time frame than the Eastern Interconnection. MISO argues that this is more of a technical requirement and not a Reliability Standard and suggests there are simpler ways to control time error and manage inadvertent balances. MISO states that NERC previously allowed unilateral payback of inadvertent balance of up to 20 percent of bias when the payback is in a direction to reduce time error and states that this reduced the number of time error corrections while giving balancing authorities a tool to balance their accounts. In its comments addressing BAL-006-1, MISO suggests that the number of time error corrections could be reduced by following the European methodology which has a wider window of allowable time and implements full clock-day, but with a smaller offset.

ii. Commission Determination

382. The Commission approves Reliability Standard BAL-004-0 as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to BAL-004-0 through the Reliability Standards development process that includes Levels of Non-Compliance and additional Measures for Requirement R3. Further, based on commenters' concerns that there is no engineering basis for changing the time error correction to the WECC approach or any other approach, when reviewing the Reliability Standard during the ERO's scheduled five-year cycle of review, we direct the ERO to perform research that would provide a technical basis for the present approach or for any alternative approach.

383. Many commenters aver that the time error correction procedure belongs within the realm of NAESB and is not a reliability issue. The Commission disagrees, as BAL-004-0 is intended to ensure that time error corrections are performed in a manner that does not

adversely affect the reliability of the Interconnection. The financial aspects of time error correction such as MISO's concern about the unilateral payback of interchange imbalances remain with NAESB. However, the technical details, including the means to carry out the procedure, are a reliability issue.

384. We believe that the efficiency of the time error correction can be viewed as a measure of whether all balancing authorities are participating in time error correction. Requirement R3 states that each balancing authority, when requested, shall participate in a time error correction. The Commission believes that this is a critical requirement, but the data on the NERC website indicates that efficiency is decreasing, indicating that fewer balancing authorities are employing time error correction.[184] Therefore, the Commission affirms its preliminary finding that the efficiency of time error corrections has decreased over the last ten years and that participation in time error corrections may be lacking.[185] Accordingly, we direct the ERO to develop additional Measures and add Levels of Non-Compliance to assure that the requirements in Requirement R3 are achieved. One approach to achieving this would be to use the existing measurement of efficiency as a metric of participation of all balancing authorities. If the efficiency is significantly less than 100 percent, the Measures should provide a process to identify which balancing authorities are not meeting the requirements of the Reliability Standard.

385. Although the Commission noted in the NOPR that WECC's time error correction procedure appears to serve as a more effective means of accomplishing time error correction, based on concerns that there is no engineering basis for changing the time error correction to the WECC approach, the Commission will not direct the ERO to adopt requirements similar to WECC's procedure. With the exception of comments from APPA and EEI, most commenters do not believe or are uncertain about whether the WECC procedure is appropriate for the Eastern Interconnection. However, when this Reliability Standard is scheduled for its regular five-year cycle of review, the Commission directs the ERO to perform whatever research it and the industry believe is necessary to provide a sound technical basis for either continuing with the present practice or identifying an alternative practice that is more effective and helps reduce inadvertent interchange.

386. The Commission agrees with MISO regarding the number of time error corrections using WECC's procedure. However, the magnitude of the frequency change

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[184] See W.R. Prince, et al., Cost Aspects of AGC, Inadvertent Energy and Time Error, IEEE Transactions on Power Systems, February 1990, at 111.

[185] NOPR at P 179, 183.

in the WECC automatic time error correction is smaller than the manual correction and timing of the corrections are better correlated to when the error was created. These two characteristics of the WECC procedure avoid placing the system in less secure conditions and tie the payback to the initiating action, both of which appear to better serve both reliability and equity.

f. Automatic Generation Control (BAL-005-0)

387. The goal of this Reliability Standard is to maintain Interconnection frequency by requiring that all generation, transmission, and customer load be within the metered boundaries of a balancing authority area, and establishing the functional requirements for the balancing authority's regulation service, including its calculation of ACE.

388. In the NOPR, the Commission proposed to approve Reliability Standard BAL-005-0 as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission proposed to direct NERC to submit a modification to BAL-005-0 that: (1) includes Requirements that identify the minimum amount of automatic generation control or regulating reserves a balancing authority must have at any given time; (2) changes the title of the Reliability Standard to be neutral as to source of the reserves; (3) includes DSM and direct control load management as part of contingency reserves and (4) includes additional Levels of Non-Compliance and Measures, including a Measure that provides for a verification process over the minimum required automatic generation control or regulating reserves a balancing authority maintains.[186]

389. Further, the NOPR stated that the Commission is interested in knowing whether any balancing authority is experiencing or is predicting any difficulty in obtaining sufficient automatic generation control.

i. Minimum Amount of Regulating Reserves

(a) Comments

390. South Carolina E&G and SMA support the Commission's proposal to include a requirement that addresses minimum regulating reserves. It states that the control performance standard metric is a lagging indicator of necessary reserves and other standards such as frequency response may eventually provide a more dynamic real-time

[186] NOPR at P 197.

indicator. South Carolina E&G believes the Commission's proposal provides a good interim solution.

391. Alcoa comments that, in establishing a minimum amount of reserves, NERC should be required to consider the quality of each source of reserves. Alcoa suggests that digitally controlled DC loads, such as an aluminum smelter, could respond much more rapidly and accurately than thermal generators and that using such resources could reduce the response time for recovery, allowing thermal units to carry fewer spinning reserves and increasing operating efficiencies of the grid.

392. NERC and other commenters[187] suggest that the Commission's proposed directive to have NERC include "Requirements that identify the minimum amount of automatic generation control or regulating reserves a balancing authority must have at any given time" is too prescriptive. They also object to this proposed requirement since a balancing authority's failure to maintain sufficient regulating reserves will result in violations of control performance standard criteria already found in BAL-001-0.

393. NERC further states that a requirement to have a minimum amount of regulating reserves would result in an arbitrary constraint that would not add to reliability and suggests that the Commission instead direct NERC to consider the issue of a minimum requirement in its Reliability Standards process in order to determine the reliability benefit.

394. EEI states that the industry currently has no consensus-based, sound engineering methodology for determining a minimum regulating reserve requirement given widely varying needs throughout the country. Nonetheless, EEI offers several guidelines that it says could be used to provide estimates for minimum regulating reserves. Similarly, MidAmerican states that normal regulating margins can vary from one balancing authority to another, and even within one balancing authority, due to frequently changing load characteristics making it extremely difficult to quantify an hourly required level of reserves. MidAmerican suggests that instead of prescriptively quantifying reserve levels, the ERO should continue to allow the industry to find efficient ways to comply with the control performance standards of BAL-001-0.

395. FirstEnergy suggests that a single entity should have the responsibility to establish, through an annual review process, the level of regulating reserves that a balancing authority must maintain pursuant to the control performance standard requirements.

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[187] See APPA, EEI, International Transmission, MISO-PJM, MidAmerican and LPPC.

FirstEnergy suggests that all generators and technically qualified DSM that participate in energy markets should install automatic generation control as a condition of market participation. In non-market areas, FirstEnergy suggests that balancing authorities could meet requirements through bilateral contracts or the normal scheduling process and suggests that the Commission might have to assert its jurisdiction and order technically qualified DSM providers to install automatic generation control at their facilities. FirstEnergy states that further work would need to be conducted on the technical qualifications and capacity thresholds that would control whether installation of automatic generation control would be required.

(b) Commission Determination

396. On this issue, the Commission directs the ERO to modify BAL-005-0 through the Reliability Standards development process to develop a process to calculate the minimum regulating reserve for a balancing authority, taking into account expected load and generation variation and transactions being ramped into or out of the balancing authority.

397. As a general matter, the Commission believes that a single entity should establish the level of regulating reserve required based on the generation mix and ramping rates in the region. We disagree with commenters that minimum regulating reserve requirements are not necessary. As South Carolina E&G correctly points out, the control performance standard metric is a lagging indicator and, as such, does not provide a good indication that the necessary amounts of regulating reserve are being carried at all times. The Commission notes that Requirement R2 requires maintenance of a level of regulating reserves in order to prospectively meet the control performance standard but does not provide a calculation for the exact level which would be required. In particular, the Commission believes that, while the control performance standard metric is useful in identifying trends relating to poor regulating practices, specification of minimum reserve requirements to be maintained at all times would complement the control performance standard metrics by providing real-time requirements necessary for proper control.

398. With regard to Alcoa's comment, the Commission agrees that the quality of reserves is relevant in determining if the resource is able to technically qualify as regulation.

399. Nevertheless, the Commission recognizes commenters' concerns related to the calculation of minimum regulation. EEI has offered several possible methods to calculate the minimum amount of regulation needed for reliability, which may or may not be consistent with others in the industry. The fundamental reason for regulating reserves is to balance load and generation in the short term due to the random variations in the balancing authorities' loads and to accommodate ramping of transactions. The Commission therefore directs the ERO to develop a process to calculate the minimum

regulating reserve for a balancing authority, taking into account expected load and generation variation and transactions being ramped into or out of the balancing authority.

ii. Title Change and Inclusion of DSM.

(a) Comments

400. As an initial matter, many commenters express confusion about the Commission's proposal to require NERC to change the title of the Reliability Standard to be neutral as to the source of the reserves, and include DSM and direct control load management as part of contingency reserves.[188] In particular, these commenters argue that this Reliability Standard pertains to regulating reserve and not contingency reserves.

401. Constellation agrees with the Commission that DSM and direct control load management should be included as viable options for regulating reserves.[189] MidAmerican agrees with the Commission on the proposed title change to allow it to be neutral as to the source of reserves but cautions the Commission on including DSM as a source of contingency reserves. While MidAmerican believes it proper to include direct control load management, which is under direct control of the system operator in contingency reserves, it states that the term DSM (as defined in the NERC glossary) is too general and includes programs that cannot contribute toward contingency reserves.

402. APPA and International Transmission both disagree with the Commission's proposals to change the title of this Reliability Standard and to include DSM and direct control load management. APPA suggests that DSM and direct control load management are not operationally equivalent to dispatchable generation resources and does not believe these programs are an effective source of regulating reserve given the current state of technology. International Transmission simply states that regulating reserves required by BAL-005-0 are specifically responsive to automatic generation control.

403. ISO-NE disagrees with the Commission's proposal to include DSM and direct control load management as part of this service, stating that responsive load has not demonstrated the load following capability necessary to provide regulation and that it is not aware of any load-based resources that can closely follow automatic generation

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[188] EEI, TVA, International Transmission, Multiple Interveners, MISO-PJM, South Carolina E&G and Wisconsin Electric.

[189] Since the Commission used the term "contingency reserves" inappropriately in this section, we assume that Constellation intended this to be regulating reserves.

control signals sent every four seconds. As an alternative to the Commission's approach, ISO-NE suggests that the Reliability Standard should define the reliability purpose or objective and then be resource-neutral.

(b) Commission Determination

404. At the outset, the Commission agrees with commenters that this Reliability Standard applies to regulating reserves and not contingency reserves. The references to contingency reserves under this Reliability Standard in the NOPR are confusing. The Commission clarifies that its direction to the ERO in this section is for it to develop a modification to BAL-005-0 through the Reliability Standards development process that changes the title of the Reliability Standard to be neutral as to the source of regulating reserves and allows the inclusion of technically qualified DSM and direct control load management as regulating reserves, subject to the clarifications provided in this section.

405. We disagree that it is not possible to use DSM and direct control load management as a source of regulating reserves or any other type of operating reserves. The Commission notes that, while DSM and direct control load management may not be widely used today as a source of operating reserves, comments received and other evidence suggest that certain types of loads are technically capable of providing this service. For example, comments received from Alcoa suggest that certain loads, such as digitally controlled DC loads, are capable of responding much faster than generation to a reserve need.

406. Given that most of the commenters' concerns over the inclusion of DSM as part of regulating reserves relate to the technical requirements, the Commission clarifies that to qualify as regulating reserves, these resources must be technically capable of providing the service. In particular, all resources providing regulation must be capable of automatically responding to real-time changes in load on an equivalent basis to the response of generation equipped with automatic generation control. From the examples provided above, the Commission understands that it may be technically possible for DSM to meet equivalent requirements as conventional generators and expects the Reliability Standards development process to provide the qualifications they must meet to participate. These qualifications will be reviewed by the Commission when the revised Reliability Standard is submitted to the Commission for approval.

iii. Whether Balancing Authorities are Experiencing or Predicting Difficulty in Obtaining Sufficient Automatic Generation Control

(a) Comments

407. Constellation states that its ability to obtain regulating reserves is hampered by a lack of resources that qualify as regulation and the practices that some transmission service providers have adopted in implementing dynamic transfers needed to procure regulating reserves from other balancing authorities. In particular, Constellation states that many transmission service providers impose a requirement that regulation services must be provided using firm transmission. Constellation suggests that purchasing regulation from another balancing authority using non-firm transmission service is allowed under the Reliability Standards and that Requirement R5 of BAL-005-0 provides that balancing authorities must have back-up plans to provide replacement regulation service if the purchased regulation service is lost. Constellation requests that the Commission clarify that the transmission providers may not impose a requirement to rely exclusively on firm transmission for the dynamic transfers of regulating reserves.

(b) Commission Determination

408. In response to Constellation's concerns, the Commission notes that, if regulation is being provided over non-firm transmission service, the entity receiving the regulation should be responsible for having a back-up plan to include loss of the non-firm transmission service as referenced in Requirement R5. The Commission believes that a balancing authority may use non-firm transmission service for procuring regulation, so long as that balancing authority has a back-up plan that it can implement to include loss of non-firm transmission service.

iv. Other Comments

(a) Comments

409. MISO states that it is uncertain of the basis of the claim that there have been an increased number of "[automatic generation control] controllable" frequency excursions.[190] MISO further states that data in the Eastern Interconnection shows the number of larger-slower excursions has decreased over the past few years.

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[190] NOPR at P 194.

410. Xcel requests that the Commission reconsider Requirement R17 of this Reliability Standard stating that the accuracy ratings for older equipment (current and potential transformers) may be difficult to determine and may require the costly replacement of this older equipment on combustion turbines and older units while adding little benefit to reliability. Xcel states that the Commission should clarify that Requirement R17 need only apply to interchange metering of the balancing area in those cases where errors in generating metering are captured in the imbalance responsibility calculation of the balancing area.

411. FirstEnergy states that Requirement R17 should include only "control center devices" instead of devices at each substation. FirstEnergy states that accuracy at the substation level is unnecessary and the costs to install automatic generation control equipment at each substation would be high. FirstEnergy also states that the term "check" in Requirement R17 needs to be clarified.

412. California Cogeneration states that the Commission has previously ruled that separate metering for the gross generation of a customer-owned generator is not proper or necessary, and states that the Commission should clarify that this Reliability Standard does not establish metering requirements for individual generators, and does not allow separate metering of generation and load on an end-user's site.[191]

413. LPPC notes that BAL-005-0 has 17 requirements but no Measures, and that it uses phrases such as "adequate metering" and "burden on the interconnection." LPPC contends that there is no definition for these ambiguous terms and that there is no way to determine if terms like "adequate metering" will mean the same thing in different parts of the country or ensure consistent penalties will be assessed for the same violation.

(b) Commission Determination

414. The Commission agrees with MISO that, while the number of frequency deviations due to loss of generation has decreased, the Commission is concerned with the implications of the actual data presented by PJM that shows two frequency deviations each week day without the loss of generation.[192] This concern is supplemented by

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[191] See California Cogeneration at 6, citing California Independent System Operator Corp., Opinion No. 464, 104 FERC ¶ 61,196 (2003).

[192] NOPR at n.134.

documents that identify that some balancing authorities are restricting automatic generation control actions during schedule changes.[193]

415. Both Xcel and FirstEnergy question Requirement R17 but do not oppose the Commission's proposal to approve this Reliability Standard. Earlier in this Final Rule, we direct the ERO to consider the comments received to the NOPR in its Reliability Standards development process. Thus, the comments of Xcel and FirstEnergy should be addressed by the ERO when this Reliability Standard is revisited as part of the ERO's Work Plan.

416. California Cogeneration requests clarification that Commission rulings made prior to the enactment of FPA section 215 would still be applicable. The case cited by California Cogeneration was issued before EPAct 2005 was enacted and gave the Commission direct responsibility over Bulk-Power System reliability. By its terms, BAL-005-0 requires each generator operator with generating facilities operating within an Interconnection to ensure that those generating facilities are included within the metered boundaries of a balancing authority area. Therefore, any generator that is subject to the Reliability Standards, as discussed in the Applicability Issues section of this Final Rule,[194] is subject to the metering requirements in this Reliability Standard. Our conclusion, however, does not determine the appropriate ratemaking treatment.

417. With respect to LPPC's concern that terms used in the Reliability Standard are not definitive when viewed individually, and LPPC's statement that the Reliability Standard is ambiguous because it does not include Measures, we disagree. The Commission finds each Requirement of BAL-005-0 is clear and enforceable. The Requirements provide sufficient guidance for an entity to understand its obligations. When Measures are incorporated into the Reliability Standard, the Measures will provide guidance on assessing non-compliance with the Requirements. For these reasons and as previously addressed in the NOPR, the Commission disagrees that the enforceable obligations set forth in Requirements are unclear absent Measures.

418. The Commission notes that no one commented on the proposal to include Levels of Non-Compliance and Measures, including a Measure that provides for a verification process over the minimum required automatic generation control or regulating reserves a

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[193] See R. L. Vice, Frequency Issues 2005, available at: http://www.wecc.biz/documents/library/RITF/Frequency_Issues_2005_rev_0.pdf

[194] See Applicability Issues: Bulk-Power Ststem v. Bulk Electric System and Applicability to Small Entities, supra sections II.C.1-2.

balancing authority maintains. The Commission adopts the NOPR proposal to require the ERO to modifiy the Reliability Standards to include a Measure that provides for a verification process over the minimum required automatic generation control or regulating reserves a balancing authority maintains. However, as discussed in the Common Issues section of this Final Rule, we will leave it to the discretion of the ERO whether to include other Measuers.[195]

419. FirstEnergy has a number of suggestions to improve the existing Reliability Standard and the ERO is directed to consider those suggestions in its Reliability Standards development process.

v. Summary of Commission Determinations

420. The Commission approves Reliability Standard BAL-005-0 as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to BAL-002-0 through the Reliability Standards development process that: (1) develops a process to calculate the minimum regulating reserve a balancing authority must have at any given time taking into account expected load and generation variation and transactions being ramped into or out of the balancing authority; (2) changes the title of the Reliability Standard to be neutral as to the source of regulating reserves and to allow the inclusion of technically qualified DSM and direct control load management; (3) clarifies Requirement R5 of this Reliability Standard to specify the required type of transmission or backup plans when receiving regulation from outside the balancing authority when using non-firm service and (4) includes Levels of Non-Compliance and a Measure that provides for a verification process over the minimum required automatic generation control or regulating reserves a balancing authority must maintain.

g. Inadvertent Interchange (BAL-006-1)

421. BAL-006-1 requires that each balancing authority calculate and record inadvertent interchange on an hourly basis.

422. In the NOPR, the Commission proposed to approve Reliability Standard BAL-006-1 as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission proposed to direct that NERC submit a modification to BAL-006-1 that adds Measures and additional Levels of Non-

[195] See Common Issues Pertaining to Reliability Standards: Measures and Levels of Non-Compliance, supra section II.E.2.

Compliance including Measures concerning the accumulation of large inadvertent imbalances.[196]

423. In addition, the NOPR solicited comment on whether accumulation of large amounts of inadvertent imbalances is a concern to the industry and if so, options to address the accumulation.

i. Measures and Additional Levels of Non-Compliance Including Measures Concerning the Accumulation of Large Inadvertent Imbalances

(a) Comments

424. Certain commenters[197] do not support the Commission's proposal to add Measures and additional Levels of Non-Compliance, including Measures concerning the accumulation of large inadvertent imbalances. Xcel states that such a measure would not enhance reliability and involves primarily a commercial matter. MRO suggests that large inadvertent balances are an equity issue and as such should be addressed through business practices and not through the Reliability Standards. MidAmerican states that no additional measures addressing inadvertent imbalances are needed in this Reliability Standard because the issue is adequately addressed in other Reliability Standards.[198] MidAmerican states that if the Commission proceeds to require Measures and Levels of Non-Compliance for large accumulations, it must insure that no "double penalties" are imposed.

425. EEI believes that the need to set a Measure for the accumulation of large inadvertent imbalances may be premature. EEI suggests that inadvertent energy is not a problem in real-time operations and is the result of frequency over-bias. EEI further states that if the Commission believes the industry should address both inadvertent energy and frequency bias, the clear consequence is a fundamental reconsideration of the

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[196] NOPR at P 212.

[197] Xcel, MRO, MidAmerican and MISO-PJM.

[198] MidAmerican explains that large interchange imbalances are a result of telemetry failures, AGC misoperation or scheduling errors and further states that BAL-001 addresses AGC performance and the INT standards handle compliance with scheduling requirements.

control performance standard. EEI strongly recommends that the Commission clarify whether it intends for the industry to reconsider this fundamental reliability principle.

426. Constellation states some concern regarding the ability of balancing authorities to make appropriate arrangements to settle inadvertent imbalances. In particular, Constellation states that in arranging bilateral paybacks, it is difficult to find a counterparty with an opposite balance and there are transmission fees that further hinder the process of these paybacks. Constellation states that the Commission should require the industry to adopt procedures that will better facilitate bilateral payback of inadvertent energy, such as waiving the scheduling requirement for small bilateral paybacks (such as WECC has implemented).

427. TAPS repeats the arguments it made in its comments on the Staff Preliminary Assessment that the existing treatment of balancing authority inadvertent interchange is not comparable to the treatment of energy imbalances. TAPS suggests that the Commission has an obligation to do more than what is proposed in the NOPR, which states that the issue is being addressed in the OATT reform docket[199] while approving Reliability Standards that perpetuate the preferential treatment of balancing authority inadvertent interchange.[200]

(b) Commission Determination

428. The Commission directs the ERO to develop a modification to BAL-006-1 that adds Measures concerning the accumulation of large inadvertent imbalances and Levels of Non-Compliance. While we agree that inadvertent imbalances do not normally affect the real-time operations of the Bulk-Power System and pose no immediate threat to reliability, we are concerned that large imbalances represent dependence by some balancing authorities on their neighbors and are an indication of less than desirable balancing of generation with load. The Commission also notes that the stated purpose of this Reliability Standard is to define a process for monitoring balancing authorities to ensure that, over the long term, balancing authorities do not excessively depend on other balancing authorities in the Interconnection for meeting their demand or interchange obligations.

429. The Commission disagrees with MidAmerican that having Measures in this Reliability Standard will result in double penalties. The Commission believes that this

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[199] OATT Reform NOPR at P 208.

[200] NOPR at P 206.

Reliability Standard has an independent reliability goal that "define[s] a process for monitoring balancing authorities to ensure that, over the long term, balancing authorities do not excessively depend on other balancing authority areas in the Interconnection for meeting their demand or interchange obligations."[201]

430. The Commission agrees with EEI that one of the root causes of inadvertent interchange is the difference between the actual frequency response and the existing bias settings. The Commission has directed that this cause be addressed in other BAL Reliability Standards. If the industry wishes to propose alternative metrics to the control performance Reliability Standards, the Commission suggests that it does so through the ERO processes and that such changes include an explanation of how the revised metrics would better measure the ability of an individual balancing authority to match load and generation.

431. In response to Constellation's comment about the fees associated with the settlement of inadvertent imbalances, the Commission notes that this issue relates to business practices and should be brought before NAESB or otherwise addressed in contexts other than section 215 of the FPA.

432. With respect to TAPS' concerns regarding disparate treatment of imbalances for non-control area utilities, the Commission is not convinced that this is a reliability issue. As identified in Order No. 890, inadvertent interchange is not comparable to imbalances.[202]

433. Accordingly, the Commission adopts the proposal in the NOPR to direct the ERO to develop Measures under this Reliability Standard to ensure balancing authorities will not have large inadvertent imbalances.

ii. Whether the Accumulation of Large Amounts of Inadvertent Imbalances is a Concern and Potential Options

(a) Comments

434. LPPC states that its members are concerned that large inadvertent imbalances would be an indication of an underlying issue related to overall balancing of resources

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[201] See BAL-006-1 (Inadvertent Interchange, Purpose Statement).

[202] See Order No. 890 at P 702-03.

and demand and suggests that options to address these large inadvertent imbalances should be addressed through the Reliability Standards development process.

435. NERC states that the performance requirements that relate to reliability are addressed in BAL-001-0 and BAL-002-0 and the new Reliability Standards which will replace them. Further, NERC states that if the Commission wishes to direct consideration of limits on the amount of inadvertent imbalances, such directive should be in the form of an issue to be resolved or reliability objective to be achieved rather than a specific requirement to set a fixed limit on inadvertent accumulation.

436. TVA, MISO and MidAmerican state that the accumulation of large inadvertent balances over time does not raise grid reliability issues. TVA asserts that this is largely a financial matter. In addition, TVA comments that if a balancing authority inappropriately uses the interconnection in a way which results in a large inadvertent imbalance this behavior should be reflected in the balancing authority's control performance standard compliance. MISO states that some large amounts of inadvertent imbalance are due to a balancing authority fulfilling its bias obligation. MISO states that an arbitrary cap should not be a part of this Reliability Standard.

(b) Commission Determination

437. As stated previously, while the Commission agrees that these imbalances do not present an immediate reliability problem, we believe, as stated by LPPC, that large interchange imbalances are indicative of an underlying problem related to balancing of resources and demand. It would be worthwhile for the ERO to examine the WECC time error correction procedure.

438. Since the ERO indicates that the reliability aspects of this issue will be addressed in a Reliability Standards filing later this year, the Commission asks the ERO, when filing the new Reliability Standard, to explain how the new Reliability Standard satisfies the Commission's concerns.

iii. Summary of Commission Determinations

439. Accordingly, the Commission approves Reliability Standard BAL-006-1 as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to BAL-006-1 through the Reliability Standards development process that includes Measures concerning the accumulation of large inadvertent imbalances and additional Levels of Non-Compliance.

h. Regional Differences to BAL-006-1: Inadvertent Interchange Accounting and Financial Inadvertent Settlement

440. The NOPR explained that BAL-006-1 provides for two regional differences.[203] First, a regional difference is provided for an RTO with multiple balancing authorities. The control area participants of MISO requested that MISO be given an inadvertent interchange account so that financial settlement of all energy receipts and deliveries using locational marginal pricing could be implemented to meet their Commission directed market obligations. Subsequently, Southwest Power Pool (SPP) requested, and NERC approved, the same regional difference for.[204]

441. Second, the NOPR explained that a regional difference would apply to the control area participants of MISO and SPP that would allow each RTO to financially settle inadvertent energy between control areas in the RTO. Each RTO would maintain accumulations of the net inadvertent interchange for all the control areas in the RTO after the financial settlement, and therefore accumulation of net-interchange would not affect the non-participant control areas.

442. The Commission proposed to approve these regional differences, explaining that the two proposed regional differences relate solely to facilitating financial settlements of accumulated inadvertent interchange due to the physical differences of these areas and have minimal, if any, reliability implications.

i. Comments

443. FirstEnergy notes that the two proposed regional differences reference the Version 0 policies instead of the NERC Reliability Standards and requests that the Commission direct NERC to revise the regional differences accordingly. In addition, FirstEnergy states that the Commission should direct NERC to define the function of a waiver. FirstEnergy agrees that transferring responsibility for the tasks under these waivers to the RTO is appropriate.

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[203] NOPR at P 216.

[204] BAL-006-1, filed on August 28, 2006, would extend the regional difference to SPP.

ii. Commission Determination

444. No commenter objected to the regional differences to BAL-006-1. However, the Commission agrees with FirstEnergy that the regional differences incorrectly reference retired policy terminology. Therefore, the Commission approves the regional differences as mandatory and enforceable under Order No. 672 as necessary due to the physical differences between multiple balancing authorities and a single market[205] but the Commission directs the ERO to modify the regional differences so that they reference the current Reliability Standards and are in the standard form, which includes Requirements, Measures and Levels of Non-Compliance. The ERO should explore FirstEnergy's request to define the function of a waiver in its Reliability Standards development process.

2. CIP: Critical Infrastructure Protection

445. The goal of CIP-001-1 is to ensure that operating entities recognize sabotage events and inform appropriate authorities and each other to properly respond to the sabotage to minimize the impact on the Bulk-Power System.[206] The Reliability Standard requires that each reliability coordinator, balancing authority, transmission operator, generation operator and LSE have procedures for recognizing and for making operating personnel aware of sabotage events, and communicating information concerning sabotage events to appropriate "parties" in the Interconnection.[207]

446. In the NOPR, the Commission proposed to approve Reliability Standard CIP-001-0 as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission proposed to direct that NERC submit a modification to CIP-001-0 that: (1) includes Measures and Levels of Non-Compliance; (2) gives guidance for the term "sabotage;" (3) requires an applicable entity to contact

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[205] Order No. 672 at P 291.

[206] The NOPR addressed CIP-001-0. On November 15, 2006, NERC submitted for approval proposed Reliability Standard CIP-001-1, which revised and replaced the previous version of the Reliability Standard to include Measures and Levels of Non-Compliance.

[207] On August 28, 2006, NERC submitted for approval proposed Reliability Standards CIP-002-1 through CIP-009-1. These proposed Reliability Standards, which relate to cybersecurity, are being addressed in a separate rulemaking proceeding in Docket No. RM06-22-000.

appropriate federal authorities, such as the Department of Homeland Security, in the event of sabotage within a specified period of time and (4) requires periodic review of sabotage response procedures.

447. In the NOPR, the Commission explained that the Requirements of CIP-001-0 refer to a "sabotage event" but do not define that term. The Commission stated that, while "sabotage" is a commonly understood term and the common understanding should suffice in most circumstances, it was concerned that situations may arise in which it is not clear whether action pursuant to CIP-001-0 is required. Thus, the NOPR proposed that the ERO provide guidance clarifying the triggering event for an entity to take action pursuant to CIP-001-0.

a. Comments

448. EEI and Entergy comment that they generally agree with the Commission's perspective. While APPA and Six Cities support approving CIP-001-1 as mandatory and enforceable, they ask that the Commission defer the application of monetary penalties until further guidance is provided on what events are reportable and what steps an entity must take to be certain it is in compliance with the Reliability Standard. Claiming that CIP-001-1 is too vague to be enforceable, TAPS opposes approval until NERC has further defined "sabotage" and the facilities to which the Reliability Standard applies.

449. APPA questions whether CIP-001-1 should apply to LSEs (LSEs) contending that, unlike transmission owners and generators, LSEs do not own or operate "hard assets" that are normally thought of "at risk" to sabotage. It claims that compliance would be particularly burdensome for small LSEs, such as the requirement to provide a preliminary report within one hour of an event. APPA states that NERC should therefore reconsider whether LSEs should be required to comply with this Reliability Standard. Further, while APPA supports the application of CIP-001-1 to larger generators and any unit required for reliable interconnected operations, it questions whether it is critical to extend the Reliability Standard to all generator operators – noting that there are 3,564 generating plants in the United States with a total capacity of 75 MW or less. APPA contends that the incremental benefits of requiring all generators to comply with CIP procedures seem minimal since many facilities are unlikely to have a material impact on Bulk-Power System reliability or be a target for sabotage in the first place. APPA suggests that the Commission defer action on CIP-001-1 while it implements a prioritization plan.

450. TAPS and California Cogeneration are also concerned about applicability and contend that compliance should be limited to those that have a significant or material impact on Bulk-Power System reliability. Both are concerned that compliance with this Reliability Standard would create significant administrative burdens and documentation requirements that are not justified where a facility does not have a material impact on the

Bulk-Power System. California Cogeneration suggests that CIP-001-1 be revised to: (1) exclude generator output used on-site and (2) provide a mechanism for determining that a facility has no material impact and thus is exempt from compliance.

451. A number of commenters agree with the Commission's concern that the term "sabotage" needs to be better defined and guidance provided on the triggering events that would cause an entity to report an event.[208] FirstEnergy states that this definition should differentiate between cyber and physical sabotage and should exclude unintentional operator error. It advocates a threshold of materiality to exclude acts that do not threaten to reduce the ability to provide service or compromise safety and security. SoCal Edison states that clarification regarding the meaning of sabotage and the triggering event for reporting would be helpful and prevent over-reporting.

452. APPA comments that Requirement R1 of CIP-001-1, which provides that an entity must have procedures for recognizing sabotage events and making its personnel aware of sabotage events, while a "good first step," lacks sufficient detail upon which the ERO can base compliance and enforcement efforts. It characterizes CIP-001-1 as an "entity-specific 'fill-in-the-blank' standard" that does not provide sufficient direction or guidance for an entity to determine whether it is in compliance. APPA further states that Measure M1 provides no criteria for a Regional Entity, acting in its capacity as a compliance monitor, to make an objective determination that an entity's sabotage procedure is adequate.

453. In response to the Commission's concern regarding the need for periodic review of sabotage response procedures, FirstEnergy suggests that CIP-001-1 should define what time period is sufficient for periodic reviews and suggests that a bi-annual review would be appropriate. MRO believes that a requirement to annually review the sabotage response procedures should be added to the Reliability Standard.

454. NERC objects to the wording of the Commission's proposed directive that NERC modify CIP-001-1 to require an applicable entity to contact appropriate federal authorities, such as the Department of Homeland Security, in the event of sabotage within a specified period of time. NERC states the Commission's directive is overly prescriptive because it specifies language to be included in the standard and thereby circumvents the Reliability Standards development process. Further, NERC objects that this directive would require entities in other nations such as Canada or Mexico to report to the U.S. Department of Homeland Security. Santa Clara suggests that Requirement R4 (and corresponding measure M3) should be modified to state that "...contacts should be

[208] See, e.g., APPA, FirstEnergy, SoCal Edison, Six Cities and TAPS.

established with the appropriate public safety officials or directly with the local Federal Bureau of Investigation (FBI) or Royal Canadian Mounted Police (RCMP) such that communication channels are established to report incidents to the appropriate authority." It states that, in the case of a municipal utility that is part of a local governmental agency that already has a public safety department which is in regular contact with the local FBI, and where clear communication channels already exist between the public safety department and the utility, it would be redundant for the utility to establish a direct link to the FBI for reporting purposes. Xcel also suggests that the term "appropriate federal authorities" should be modified to avoid conflict with established processes now in place, and that the term should be specifically identified so the Requirements on affected entities are clear.

455. Process Electricity Committee advocates approval of CIP-001-0 as initially proposed by NERC without modification, but it objects to the revised CIP-001-1 as placing an undue burden on smaller entities. It is concerned that the Commission's proposal to require mandatory reporting to appropriate federal authorities within a specific time frame will impose substantial burdens on end users with little or no discernable benefit. It states that there is no evidence that any entities – both regulated and unregulated – under-report sabotage events. Further, according to Process Electricity Committee, the adoption of uniform requirements could require end users to modify existing security programs and procedures that are designed to protect industrial facilities, whereas the utility generator requirements could be conflicting or duplicative.

456. Entergy and FirstEnergy express concern that there is a potential for redundancy between CIP-001-1 and other related federal reporting standards. Entergy states that NERC should consider ensuring that CIP-001-1 is consistent with, but not duplicative of, these other requirements. FirstEnergy states that both the Department of Energy (DOE) and the Energy Information Administration (EIA) impose reporting requirements that are similar to CIP-001-1 and suggests that to avoid conflicts the reporting requirements under this Reliability Standard should be conformed to the existing DOE and EIA requirements. It also states that nuclear units have their own set of operating requirements, including procedures for reporting sabotage, and suggests that a company's compliance with NRC procedures should be presumed to meet NERC standards. EEI, FirstEnergy and Xcel suggest greater coordination, possibly with all events being reported to NERC, which would then coordinate with federal authorities. Xcel suggests the development of a single sabotage reporting form to streamline the reporting process and make it easier for affected entities to provide reports in a timely manner.

457. APPA and FirstEnergy express concern about a requirement to report an act of sabotage within a fixed period of time. Xcel states that the triggering event for disclosure of an act of sabotage often will be unclear and that an investigation will take time especially if the event occurs at an unstaffed or remote facility. Thus, Xcel does not

believe that the standard should contain an express time limit for reporting an act of sabotage since the amount of time necessary to make that report may vary depending on the circumstances. FirstEnergy suggests that CIP-001-1 should define the specified period for reporting an incident beginning from when the event is discovered or suspected to be sabotage. APPA is also concerned that a specific time limit for a report (such as a 60 minute requirement) would be burdensome to meet for a small LSE that is not continuously staffed when a triggering event occurs outside staffed hours.

b. Commission Determination

i. Applicability to Small Entities

458. The Commission acknowledges the concerns of the commenters about the applicability of CIP-001-1 to small entities and has addressed the concerns of small entities generally earlier in this Final Rule. Our approval of the ERO Compliance Registry criteria to determine which users, owners and operators are responsible for compliance addresses the concerns of APPA and others.

459. However, the Commission believes that there are specific reasons for applying this Reliability Standard to such entities, as discussed in the NOPR. APPA indicates that some small LSEs do not own or operate "hard assets" that are normally thought of as "at risk" to sabotage. The Commission is concerned that, an adversary might determine that a small LSE is the appropriate target when the adversary aims at a particular population or facility. Or an adversary may target a small user, owner or operator because it may have similar equipment or protections as a larger facility, that is, the adversary may use an attack against a smaller facility as a training "exercise." The knowledge of sabotage events that occur at any facility (including small facilities) may be helpful to those facilities that are traditionally considered to be the primary targets of adversaries as well as to all members of the electric sector, the law enforcement community and other critical infrastructures.

460. For these reasons, the Commission remains concerned that a wider application of CIP-001-1 may be appropriate for Bulk-Power System reliability. Balancing these concerns with our earlier discussion of the applicability of Reliability Standards to smaller entities, we will not direct the ERO to make any specific modification to CIP-001-1 to address applicability. However, we direct the ERO, as part of its Work Plan, to consider in the Reliability Standards development process, possible revisions to CIP-001-1 that address our concerns regarding the need for wider application of the Reliability Standard. Further, when addressing such applicability issues, the ERO should consider whether separate, less burdensome requirements for smaller entities may be appropriate to address these concerns.

ii. Definition of Sabotage

461. Several commenters agree with the Commission's concern that the term "sabotage" should be defined. For the reasons stated in the NOPR, we direct that the ERO further define the term and provide guidance on triggering events that would cause an entity to report an event.[209] However, we disagree with those commenters that suggest the term "sabotage" is so vague as to justify a delay in approval or the application of monetary penalties. As explained in the NOPR, we believe that the term sabotage is commonly understood and that common understanding should suffice in most instances.[210] Further, in the interim while the matter is being addressed by the Reliability Standards development process, we direct the ERO to provide advice to entities that have concerns about the reporting of particular circumstances as they arise.

462. Further, in defining sabotage, the ERO should consider FirstEnergy's suggestions to differentiate between cyber and physical sabotage and develop a threshold of materiality. However, regarding the latter suggestion, the Commission directs that guidance for a threshold of materiality must be designed carefully to mitigate the risk that an unsuccessful sabotage event is not correctly reported because it did not cause sufficient harm.

iii. Procedures for Recognizing Sabotage Events

463. Requirement R1 of CIP-001-1 provides that an applicable entity must have procedures "for the recognition of and for making their operational personnel aware of sabotage events on its facilities and multi-site sabotage affecting larger portions of the Interconnection." The NOPR expressed concern that the provision does not establish baseline requirements regarding what issues should be addressed by the developed procedures. APPA goes even further and, characterizing it as an entity specific fill-in-the-blank standard, contends that it lacks sufficient detail upon which the ERO can base compliance and enforcement efforts.

464. While the Commission believes that this Reliability Standard can and should be enhanced by specifying baseline requirements regarding what issues should be addressed in the procedures for recognizing sabotage events and making personnel aware of such events, it disagrees with APPA that Requirement R1 lacks sufficient detail on which to

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[209] See NOPR at P 224.

[210] Id. at P 224, n.140, quoting a dictionary definition of "sabotage" as "destruction of property or obstruction of normal operations, as by civilians or enemy agents . . .."

base ERO compliance and enforcement efforts. As indicated in Measure M1, an applicable entity must have and maintain the procedure as defined by Requirement R1. Thus, if an applicable entity cannot provide the required procedure to the ERO or a Regional Entity auditor upon request, it would likely be subject to an enforcement action. While we expect that an applicable entity that has made a good faith effort to develop a meaningful procedure to comply with Requirement R1 (and Measure M1) would not be subject to an enforcement action, an ERO or Regional Entity audit team may provide steps to improve the individual entity's procedure, which would serve as a baseline for that entity for any subsequent audit. Such an approach would be acceptable and allow for meaningful compliance in the interim until CIP-001-1 is modified pursuant to our directive.

iv. Periodic Review of Sabotage Reporting Plans

465. The Commission was concerned that CIP-001-1 did not include a requirement for the periodic review or updating of sabotage reporting plans or procedures, or for the periodic testing of the sabotage reporting procedures to verify that they achieve the desired result.[211] In response, FirstEnergy suggests that a bi-annual review would be appropriate and MRO believes that an annual review requirement should be added to the Reliability Standard. Periodic testing of the procedures through an exercise would assist in determining if the procedures are adequate for achieving the desired result. Lessons learned from these events would help in developing or modifying the sabotage reporting procedures.

466. The Commission affirms the NOPR directive and directs the ERO to incorporate a periodic review or updating of the sabotage reporting procedures and for the periodic testing of the sabotage reporting procedures. At this time, the Commission does not specify a review period as suggested by FirstEnergy and MRO and, rather, believes that the appropriate period should be determined through the ERO's Reliability Standards development process. However, the Commission directs that the ERO begin this process by considering a staggered schedule of annual testing of the procedures with modifications made when warranted formal review of the procedures every two or three years.

v. Mandatory Reporting Of a Sabotage Event

467. CIP-001-1, Requirement R4, requires that each applicable entity establish communications contacts, as applicable, with the local FBI or Royal Canadian Mounted

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[211] NOPR at P 228.

Police officials and develop reporting procedures as appropriate to its circumstances. The Commission in the NOPR expressed concern that the Reliability Standard does not require an applicable entity to actually contact the appropriate governmental or regulatory body in the event of sabotage. Therefore, the Commission proposed that NERC modify the Reliability Standard to require an applicable entity to "contact appropriate federal authorities, such as the Department of Homeland Security, in the event of sabotage within a specified period of time."[212]

468. As mentioned above, NERC and others object to the wording of the proposed directive as overly prescriptive and note that the reference to "appropriate federal authorities" fails to recognize the international application of the Reliability Standard. The example of the Department of Homeland Security as an "appropriate federal authority" was not intended to be an exclusive designation. Nonetheless, the Commission agrees that a reference to "federal authorities" could create confusion. Accordingly, we modify the direction in the NOPR and now direct the ERO to address our underlying concern regarding mandatory reporting of a sabotage event. The ERO's Reliability Standards development process should develop the language to implement this directive.

469. As noted above, FirstEnergy, EEI and others express concern regarding the potential for redundant reporting under CIP-001-1 and other government reporting standards, and the need for greater coordination. The Commission understands the concern about multiple reporting channels that may arise and the burden that this may present to applicable entities. We direct the ERO to explore ways to address these concerns – including central coordination of sabotage reports and a uniform reporting format – in developing modifications to the Reliability Standard with the appropriate governmental agencies that have levied the reporting requirements.

470. The Commission stated that the reporting of a sabotage event should occur within a fixed period of time, and referred to a Homeland Security procedure that references a 60-minute period for submitting a preliminary report and a follow-up report within four to six hours.[213] While commenters raise a number of concerns about the need for fairness in the implementation of such a requirement, they do not challenge the NOPR's underlying concern or the appropriateness of such a provision. The Commission believes that an applicable entity should report a sabotage event in a timely manner to allow government authorities and critical infrastructure members the opportunity to react in a

[212] Id. at P 231.

[213] Id. at n.142.

meaningful manner to such information. Thus, the Commission directs the ERO to modify CIP-001-1 to require an applicable entity to contact appropriate governmental authorities in the event of sabotage within a specified period of time, even if it is a preliminary report. The ERO, through its Reliability Standards development process, is directed to determine the proper reporting period. In doing so, the ERO should consider suggestions raised by commenters such as FirstEnergy and Xcel to define the specified period for reporting an incident beginning from when an event is discovered or suspected to be sabotage, and APPA's concerns regarding events at unstaffed or remote facilities, and triggering events occurring outside staffed hours at small entities.

c. Summary of Commission Determinations

471. As explained in the NOPR, while the Commission has identified concerns regarding CIP-001-1, we believe that the proposal serves an important purpose in ensuring that operating entities properly respond to sabotage events to minimize the adverse impact on the Bulk-Power System. Accordingly, the Commission approves Reliability Standard CIP-001-1 as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop the following modifications to the Reliability Standard through the Reliability Standards development process: (1) further define sabotage and provide guidance as to the triggering events that would cause an entity to report a sabotage event; (2) specify baseline requirements regarding what issues should be addressed in the procedures for recognizing sabotage events and making personnel aware of such events; (3) incorporate a periodic review or updating of the sabotage reporting procedures and for the periodic testing of the sabotage reporting procedures and (4) require an applicable entity to contact appropriate governmental authorities in the event of sabotage within a specified period of time. In addition, we direct the ERO, as part of its Work Plan, to consider revisions to CIP-001-1 that address our concerns regarding applicability to smaller entities. The ERO should also consider consolidation of the sabotage reporting forms and the sabotage reporting channels with the appropriate governmental authorities to minimize the impact of these reporting requirements on all entities.

3. COM: Communications

472. The Communications (COM) group contains two Reliability Standards. The first requires that transmission operators, balancing authorities and other applicable entities have adequate internal and external telecommunications facilities for the exchange of interconnection and operating information necessary to maintain reliability. The second Reliability Standard requires that these communication facilities be staffed and available to address real-time emergencies and that operating personnel carry out effective communications.

473. The NOPR contained a discussion of how the transmission operator and generator operator function would apply to RTO, ISO and pooled resource organizations. In this Final Rule, conclusions concerning those issues are covered in the Applicability Issues section.[214] In essence, an organization may, but does not have to, accept compliance responsibility on behalf of its members. Since telecommunication is vital to the Reliable Operation of the Bulk-Power System, the Commission finds that it is not permissible to have either unnecessary overlaps or gaps in telecommunications.

a. Telecommunications (COM-001-1)

474. COM-001-0[215] seeks to ensure coordinated telecommunications among operating entities, which are fundamental to maintaining grid reliability. This proposed Reliability Standard establishes general telecommunications requirements for specific operating entities, including equipment testing and coordination. It also establishes English as the common language between and among operating personnel, and sets policy for using the NERCNet telecommunications system. COM-001-0 applies to transmission operators, balancing authorities, reliability coordinators and NERCNet user organizations.

475. The Commission proposed to approve Reliability Standard COM-001-0 as mandatory and enforceable. In addition, the Commission proposed to direct that NERC submit a modification to COM-001-0 that: (1) includes Measures and Levels of Non-Compliance; (2) includes generator operators and distribution providers as applicable entities and (3) includes Requirements for communication facilities for use during emergency situations.

476. In addition, the Commission sought comments on specific requirements or performance criteria for telecommunications facilities, noting that COM-001-0 might be improved by providing specific requirements for adequacy, redundancy, diverse routing, and periodic testing. The Commission also sought comments on whether the relative roles of applicable entities should be considered when setting down requirements for telecommunication facilities, since the needs will vary based on role.

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[214] See Applicability Issues: Use of the NERC Functional Model, supra section II.C.4.

[215] In its November 15, 2006, filing, NERC submitted COM-001-1, which supercedes the Version 0 Reliability Standard. COM-001-1 adds Measures and Levels of Non-Compliance to the Version 0 Reliability Standard. In this Final Rule, we review the November version, COM-001-1.

477. Most comments address the specific modifications and concerns raised by the Commission in the NOPR. Below, we address each topic separately, followed by a summary of our conclusions.

i. Applicability to Generator Operators and Distribution Providers and their Telecommunications Facility Requirements

478. The Commission stated in the NOPR that communications with generator operators and distribution providers are necessary to maintain system reliability during normal and emergency situations, while recognizing that telecommunication facility needs will vary between these two entities and other reliability entities such as reliability coordinators, transmission operators and balancing authorities. The Requirements for each of these entities will vary according to its respective roles.

(a) Comments

479. EEI supports the goals stated by the Commission with regard to COM-001-1, in particular, the need to apply this Reliability Standard to distribution providers. TVA agrees with the Commission's reasoning that generator operators and distribution providers should be subject to this Reliability Standard, but seeks clarification that such entities may transfer their responsibility for data sharing with and reporting to NERC and Regional Entities by contract to another entity.

480. In contrast, MRO, APPA, TAPS and SDG&E indicate that applying this Reliability Standard to generator operators and distribution providers may not be appropriate. APPA argues generator operators and distribution providers do not affect the Bulk-Power System in the same manner as a reliability coordinator, balancing authority or transmission provider does, since generator operators and distribution providers only have a secondary or support role with respect to reliability of the Bulk-Power System.

481. Further, APPA and SDG&E are concerned that the Commission's proposal would unnecessarily subject generator operators and distribution providers to Requirements that were designed for transmission operators. For example, APPA indicates that NERCNet was designed as part of the NERC Interregional Security Network for communications among reliability coordinators, balancing authorities and transmission operators, and was not designed to connect generators to their balancing authorities and distribution providers to their transmission operators. Further, SDG&E submits that, while generator operators and distribution providers may logically have some role in enabling communications that help ensure reliability, SDG&E sees no basis for subjecting such entities to the same, extensive requirements incumbent on transmission operators.

482. APPA argues that, while telecommunications Reliability Standards with generator operators and distribution providers as applicable entities may be needed, they are already subject to telecommunications requirements as part of their bilateral interconnection agreements with balancing authorities and transmission providers. It contends that if NERC deems it necessary, a separate Reliability Standard should be developed to govern telecommunications between balancing authorities and generator operators, and between transmission operators and distribution providers under their respective footprints.

483. TAPS states that Requirement R1.4 has an ambiguous requirement[216] that, if applied to distribution providers and generator operators, would impose redundancy requirements well beyond what is reasonably necessary for Bulk-Power System reliability. Further it asserts that the NOPR provides no basis for expanding the Reliability Standard to small entities, such as a 2-MW distribution provider or generator, much less than one that has no connection to the bulk transmission system. Finally, TAPS contends that, in making this proposal, the Commission is "over-stepping its bounds" by not leaving it to the ERO's expert judgment whether COM-001-1 has sufficient coverage to protect Bulk-Power System reliability and states that, in any event, applicability should be limited through NERC's registry criteria and definition of bulk electric system.

484. MRO further states that applying this Reliability Standard to generator operators and distribution providers and including Requirements for communication facilities for use during emergency situations may also not be appropriate if the distribution provider does not operate its own systems.

485. California PUC believes that the Commission's assertion of authority to impose Reliability Standards applicable to either generator operators or distribution providers should be extremely limited, and should be based on an essential nexus between the proposed Reliability Standard and the operation of the Bulk-Power System. It contends that this aspect of the Commission's proposed directive is duplicative and unnecessary when applied to entities in California, and risks being counterproductive unless applied with considerable restraint since California PUC's Operation Standards require power plants to maintain the ability to communicate with the balancing authority at all times, and to plan for the continuity of communications during emergencies.

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[216] COM-001-1 Requirement R1.4 states: "Where applicable, these [telecommunications] facilities shall be redundant and diversely routed."

486. Process Electricity Committee agrees that the extent and maintenance of telecommunication facilities should vary based on the operator's potential affect on system reliability. It points out that existing regulations and contractual obligations already require end users to maintain adequate communications facilities. Further, it states that on-site generation interconnected with the electricity grid typically is required to maintain sufficient telecommunications facilities between the generator owner or operator and the grid operator. In the absence of evidence that this arrangement is inadequate, Process Electricity Committee recommends that the amended COM Reliability Standards be clarified so that they do not impose new requirements on end users and other entities that have only minimal impact on the reliability of the interconnected transmission network.

(b) Commission Determination

487. The Commission reaffirms its position that generator operators and distribution providers should be included as applicable entities in COM-001-1 to ensure there is no reliability gap during normal and emergency operations. For example, during a blackstart when normal communications may be disrupted, it is essential that the transmission operator, balancing authority and reliability coordinator maintain communications with their distribution providers and generator operators. However, the current version of Reliability Standard COM-001-1 does not require this because it does not include generator operators and distribution providers as applicable entities. We clarify that the NOPR did not propose to require redundancy on generator operators' or distribution providers' telecommunication facilities or that generator operators or distribution providers be trained on anything not related to their functions during normal and emergency conditions. We expect the telecommunication requirements for all applicable entities will vary according to their roles and that these requirements will be developed under the Reliability Standards development process.

488. As stated in the Applicability Issues section of this Final Rule, entities may share responsibility for complying with Reliability Standards and the ERO's registration process takes this into account.[217] We believe that this satisfies TVA's concern about data sharing and reporting responsibilities and MRO's concern about applying this Reliability Standard to distribution providers only if they operate their own systems.

489. The Commission agrees with APPA that the primary purpose of Requirement R6 is to provide information to ensure reliable interregional operations and therefore should not apply to generator operators and distribution providers. However, we disagree that

[217] See Applicability Issues: Applicability to Small Entities, supra section II.C.2.

this leads to the conclusion that generator operators and distribution providers should not be included in COM-001-1. As we have stated, telecommunication requirements for all applicable entities will vary according to their roles. In modifying COM-001-1 through the Reliability Standards development process, the Commission believes that the ERO should create appropriate telecommunications requirements for generator operators and distribution providers, which may be additional and separate Requirements to COM-001-1 or, alternatively, a new Reliability Standard as suggested by APPA.

490. In response to SDG&E, the Commission's intent is not to subject generator operators and distribution providers to the same requirements placed on transmission operators. As part of the modification of this Reliability Standard or development of a new Reliability Standard to include the appropriate telecommunications facility requirements for generator operators and distribution providers, the ERO should take into account what would be required of generator operators and distribution providers in terms of telecommunications for the Reliable Operation of the Bulk-Power System, instead of applying the same requirements as are placed on other reliability entities such as reliability coordinators, balancing authorities and transmission operators.

491. With regard to TAPS's comment, the Commission has identified a concern and directs that the ERO address the matter through its Reliability Standards development process. This comports with section 215(d)(5) of the FPA which authorizes the Commission, upon its own motion, to order the ERO "to submit to the Commission a proposed Reliability Standard or a modification to a Reliability Standard that addresses a specific matter if the Commission considers such a new or modified Reliability Standard appropriate to carry out this section." We have identified such a matter and have left to the ERO to develop a specific proposal by invoking its Reliability Standards development process. Further, consistent with our discussion above regarding applicability of Reliability Standards, applicability would be limited through NERC's registry criteria and definition of bulk electric system at this time.

492. In response to California PUC, in this Final Rule we are initially limiting the applicability of these Reliability Standards to those users, owners and operators of the Bulk-Power System on the ERO's compliance registry. The Commission notes that it has jurisdiction under section 215 of the FPA over all users, owners and operators of the Bulk-Power System to ensure Reliable Operation of the Bulk-Power System. To ensure reliability, it is important to include appropriate generator operators and distribution providers as applicable entities in Reliability Standard COM-001-1. However, any generator operator or distribution provider that is not a user, owner or operator of the Bulk-Power System will not be included. Also, at this time, the Bulk-Power System is defined on the basis of the ERO's definition of the "bulk electric system." The Commission believes that this should satisfy California PUC's concern that this

Reliability Standard be limited to Bulk-Power System operations. We will not further limit our directive as to which entities this Reliability Standard should apply.

493. As we explained in the NOPR, communication with generator operators and distribution providers becomes especially important during an emergency when generators with black start capability must be placed in service and nearby loads restored as an initial step in system restoration. This occurs at a critical time when normal communication paths may be disrupted. While many generator operators and distribution providers may have telecommunications requirements pursuant to a bilateral contract as indicated by APPA, it is important that all generator operators and distribution providers identified by the ERO through its registration process are subject to uniform telecommunications requirements. Therefore, we adopt our proposal to require the ERO to modify COM-001-1 to apply to generator operators and distribution providers. However, we recognize that some of the existing requirements (such as Requirement R6 related to NERCNet) need not apply to generator operators and distribution providers. In light of commenters' concerns, as an alternative, it would be acceptable for the ERO to develop a new Reliability Standard that would specifically address an appropriate range of Requirements for telecommunication facilities of generator operators and distribution providers that reflect their respective roles on Reliable Operation of the Bulk-Power System.

ii. Requirements for Telecommunications Facilities

494. The Commission sought comment on specific requirements or performance criteria for telecommunication facilities and whether the modified Reliability Standard should provide requirements that also consider the relative role of applicable entities.

(a) Comments

495. A number of commenters agree with the Commission that the relative role of an entity should be taken into account when specifying the requirements for its telecommunications facilities.[218] For example, ISO-NE states that a single generator operator will not need the level of redundancy and diverse routing that a reliability coordinator needs.

496. Many commenters recommend that telecommunications facilities requirements should be specified in broad terms. EEI, APPA, Alcoa, International Transmission,

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[218] See, e.g., EEI, International Transmission, ISO-NE, Process Electricity Committee and SoCal Edison.

LPPC and SoCal Edison believe that revision to COM-001-1 should provide specific or minimum requirements for adequacy, redundancy and diverse routing. However, EEI, Alcoa and Northern Indiana maintain that entities should have flexibility in meeting the requirements and to allow for innovative technological advancements. Alcoa and Northern Indiana maintain that without flexibility, an applicable entity may choose a less optimal solution just to comply with the Reliability Standard. EEI asserts that such flexibility will also permit alternative means of implementing the requirements that will translate into cost savings. International Transmission cautions that we should not prejudice the modification of this Reliability Standard by indicating the specific requirements or the performance criteria.

497. APPA states that, because the communications requirements for an entity that is responsible for serving 3,000 MW of load is distinctly different from another entity that serves 30 MW of load, the ERO should take the size of the entity into consideration.

498. NERC believes that the questions posed by the NOPR regarding performance criteria should be considered through the Reliability Standards development process, in accordance with NERC's Work Plan, which will allow a broader industry debate on the requirements for telecommunications facilities. This approach will avoid any potential conflicts with the requirements already established in the telecommunications industry and by the Institute of Electrical and Electronics Engineers.

499. Entergy states that it is unclear what cyber assets are covered by COM-001-0. Entergy believes that the Reliability Standard should focus on telecommunications that support the operation of critical assets. Entergy also believes that COM-001-0 should be expanded to include advances in communications technology. It states that NERC should consider addressing the following in a way that will facilitate an understanding of the Reliability Standards' requirements: (1) voice communications; (2) command and control data communications; (3) security coordination data communications; (4) digital messaging communications; (5) human linguistic convention and (6) other types of communications, including video conferencing and communications with remote security cameras. Entergy believes that this could be accomplished through an enhancement to the definition of communications in the NERC glossary and recasting COM-001-0 to improve the specificity of requirements for each form of communication. Finally, Entergy believes that Requirement R4 of COM-001-0, which requires reliability coordinators, transmission operators and balancing authorities to use English in all types of communications, should apply only to verbal and written communications.

500. FirstEnergy asserts that the Requirement R2 is unclear because it does not specify whether the phrase "telecommunication facilities" covers both voice and data facilities in the context of alarms. It states that, although the word "telecommunications facilities" is generally understood to mean both voice and data facilities, the current practice is to

display alarms only for data facilities. Requirement R2 could be misinterpreted to require alarms on voice facilities as well, which would be impractical.

501. Six Cities is concerned that the scope of improper conduct under the "NERCNet security policy" in Attachment 1 is virtually limitless [219] Six Cities recognizes that it would be difficult to provide a comprehensive and detailed list of all conduct that might be considered a misuse of NERCNet data, but that difficulty does not justify exposing NERCNet users to the risk of monetary penalties based on amorphous and unbounded descriptions of potentially violative conduct. Six Cities states that one solution would be to limit the imposition of monetary penalties for misuse of NERCNet data to instances where such misuse is intentional or grossly negligent. According to Six Cities, it would be appropriate to exact a monetary penalty where a NERCNet user deliberately uses NERCNet data for unauthorized or unreasonable purposes. Six Cities asks that it be modified to provide for a warning for the improper disclosure of NERCNet data where the disclosure was not intentional or grossly negligent.

(b) Commission Determination

502. The Commission adopts its NOPR proposal that telecommunications facility requirements must reflect the roles of the respective operating or reliability entities that are included in the applicability section in this Reliability Standard and how they would affect the reliability of the Bulk-Power System. We note that most commenters agree with this approach.

503. The Commission agrees with commenters that flexibility is important in setting telecommunications requirements in order to foster innovation, allow the adoption of new technologies and provide for cost-effective solutions for compliance with the Reliability

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[219] Attachment 1 provides that Violations of the NERCNet Security Policy shall include, but not be limited to any act that:

> Exposes NERC or any user of the NERCNet to actual or potential monetary loss through the compromise of data security or damage.
>
> Involves the disclosure of trade secrets, intellectual property, confidential information or the unauthorized use of data.
>
> Involves the use of data for illicit purposes, which may include violation of any law, regulation or reporting requirement of any law enforcement or government body.

Standard. However, the Commission finds that certain modifications to COM-001-1 are necessary to ensure system reliability. We believe that the ERO must specify requirements for using telecommunications facilities during normal and emergency conditions that: (1) reflect the roles of the applicable entities and their impact on Reliable Operation and (2) include adequate flexibility. Accordingly, the Commission directs the ERO to modify COM-001-1 through the Reliability Standards development process to address our concerns. The Commission believes that the concerns of Entergy and FirstEnergy are best addressed by the ERO in the Reliability Standards development process.

504. Six Cities suggests specific new improvements to COM-001-1. As stated above, such comments should be addressed as the ERO modifies the Reliability Standards in the Reliability Standards development process.

iii. Measures and Levels of Non-Compliance

505. In its November 15, 2006, filing, NERC submitted COM-001-1, which supersedes the Version 0 Reliability Standard. COM-001-1 adds Measures and Levels of Non-Compliance to the Version 0 Reliability Standard.

(a) Comments

506. ISO-NE notes that Compliance 1.1 of COM-001-0 specifies that "Regional Reliability Organizations shall be responsible for compliance monitoring ...." ISO-NE suggests that since NERC designed and created NERCNet, NERC should be responsible for maintaining and ensuring the compliance with the Reliability Standard rather than regional reliability organizations. ISO-NE recommends that the Commission direct NERC to modify Compliance 1.1 to provide that NERC shall be responsible for monitoring compliance of the NERCNet user organizations.

(b) Commission Determination

507. With respect to ISO-NE's comment, we find that a regional reliability organization does not have any role with compliance matters; that role is reserved for the ERO or the Regional Entities. However, we disagree with ISO-NE that the ERO must replace the regional reliability organization as the compliance monitor. The fact that NERC designed and created NERCNet does not require the ERO to be the compliance monitor. Section 215 of the FPA states that the ERO may delegate compliance and enforcement authority to a Regional Entity, even if the ERO creates the Reliability Standards. Therefore, although we direct that the regional reliability organization should not be the compliance monitor for NERCNet, we leave it to the ERO to determine whether it is the

appropriate compliance monitor or if compliance should be monitored by the Regional Entities for NERCNet User Organizations.

iv. Summary of Commission Determination

508. While the Commission has identified a number of concerns with regard to COM-001-1, this Reliability Standard is independently enforceable without the modifications we are directing. Therefore, the Commission approves Reliability Standard COM-001-1 as mandatory and enforceable. Because of the importance of this Reliability Standard in requiring transmission operators and others to have necessary telecommunications equipment, we additionally, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, direct the ERO to develop a modification to COM-001-1 through the Reliability Standards development process that: (1) expands the applicability to include generator operators and distribution providers and includes Requirements for their telecommunications facilities; (2) identifies specific requirements for telecommunications facilities for use in normal and emergency conditions that reflect the roles of the applicable entities and their impact on Reliable Operation and (3) includes adequate flexibility for compliance with the Reliability Standard, adoption of new technologies and cost-effective solutions. As an alternative to applying this Reliability Standard to generator operators and distribution providers, the ERO may develop a new Reliability Standard that will address the Requirements for telecommunication facilities applicable to generator operators and distribution providers.

b. Communications and Coordination (COM-002-2)

509. COM-002-2[220] seeks to ensure that transmission operators, generator operators and balancing authorities have adequate communications and that their communications capabilities are staffed and available to address real-time emergency conditions. This Reliability Standard requires balancing authorities and transmission operators to notify others through pre-determined communication paths of any condition that could threaten the reliability of their areas or when firm load shedding is anticipated.

510. The Commission proposed in the NOPR to approve Reliability Standard COM-002-1 as mandatory and enforceable. In addition, the Commission proposed to direct that NERC submit a modification to COM-002-1 that: (1) includes Measures and Levels of

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[220] In its November 15, 2006, filing, NERC submitted COM-002-2, which supercedes the Version 1 Reliability Standard. COM-002-2 adds Measures and Levels of Non-Compliance to the Version 1 Reliability Standard. In this Final Rule, we review the November version, COM-002-2.

Non-Compliance; (2) includes a Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities; (3) includes distribution providers as applicable entities and (4) requires tightened communications protocols, especially for communications during alerts and emergencies. With respect to this final issue, the Commission proposed alternatively to direct NERC to develop a new Reliability Standard that responds to Blackout Report Recommendation No. 26, which deals with the need for tightened communications protocols.

i. Applicability to Distribution Providers

(a) Comments

511. While EEI states that there is a clear need to apply the Reliability Standard to distribution providers, APPA finds the proposal problematic because it would mean that close to 2,000 public power systems would have to be added to the compliance registry. APPA argues that the Commission should instruct NERC to consider the applicability of COM-002-2 to distribution providers through its Reliability Standards development process. MRO requests that the Commission clarify whether the distribution providers will continue to operate their own systems in the future.

(b) Commission Determination

512. The Commission finds that, during both normal and emergency operations, it is essential that the transmission operator, balancing authority and reliability coordinator have communications with distribution providers. In response to APPA, as discussed above, any distribution provider that is not a user, owner or operator of the Bulk-Power System would not be required to comply with COM-002-2, even though the Commission is requiring the ERO to modify the Reliability Standard to include distribution providers as applicable entities. APPA's concern that 2,000 public power systems would have to be added to the compliance registry is misplaced, since, as we explain in our Applicability discussion above, we are approving NERC's registry process, including the registry criteria. Therefore, we adopt our proposal to require the ERO to modify COM-002-2 to apply to distribution providers through its Reliability Standards development process.

513. The Commission believes that this Reliability Standard does not alter who would operate a distribution provider's system. It only concerns communications, not the operation of the distribution system.

ii. Measures and Levels of Non-Compliance

(a) Comments

514. APPA notes that the Levels of Non-Compliance for COM-002-2 are inadequate in two respects: (1) reliability coordinators are not included in any Level of Non-Compliance and (2) the Levels of Non-Compliance for transmission operators and balancing authorities in Compliance D.2 do not reference Requirements R1 and R2. Therefore, APPA would support approval of COM-002-2 as a mandatory Reliability Standard, but would not support levying penalties for violating incomplete portions of the Reliability Standard.

(b) Commission Determination

515. As stated in the Common Issues section, a Reliability Standard is enforceable even if it does not contain Levels of Non-Compliance.[221] However, the Commission agrees with APPA that this Reliability Standard could be improved by incorporating the changes proposed by APPA. Therefore, when reviewing the Reliability Standard through the Reliability Standards development process, the ERO should consider APPA's concerns.

iii. Reliability Coordinator Assessment and Approval of Actions that have Impacts Beyond the Area Views of Transmission Operators and Balancing Authorities

(a) Comments

516. Alcoa argues that there is a need for communication regarding operating actions taken by transmission operators and balancing authorities that may have impacts beyond their area views. However, a number of commenters oppose the Commission's proposal to modify the Reliability Standard to require reliability coordinators to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities and seek clarifications.[222] Alcoa, California PUC, SDG&E and Xcel are concerned that obtaining approval from reliability coordinators could create delays in completing the operating action in emergency situations. Xcel and Alcoa

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[221] See Common Issues Pertaining to Reliability Standards: Measures and Levels of Non-Compliance, supra section II.E.2.

[222] See, e.g., APPA, EEI, California PUC, ISO-NE and SDG&E.

request that the Commission clarify that this requirement would not prevent timely performance by a transmission operator of actions necessary to maintain the reliability of its system under emergency conditions.[223] Both Alcoa and Xcel are concerned that waiting for an assessment and approval by a reliability coordinator may not be feasible, especially during emergencies. Xcel further asks the Commission to clarify that the entity taking operating actions should not be held responsible for delays caused by the reliability coordinator's assessment and approval. Alcoa suggests that there should be a clear definition of what actions have an impact beyond the area views of transmission operators or balancing authorities. SDG&E further states that serious damage to transmission equipment could occur if the transmission operator is not able to take immediate action during an emergency.

517. ISO-NE is concerned that the Commission proposal goes too far and if implemented, will prevent capable transmission operators from quickly addressing reliability problems that may arise. It maintains that transmission operators usually do not have enough time to inform the reliability coordinator, who must then "assess and approve" the proposed action. If the Commission's proposal is implemented, transmission operators will doubt themselves and delay necessary action. However, it does not see any problem for the New England balancing area and the NPCC region, because ISO-NE serves as the New England reliability coordinator, balancing authority and transmission operator.

518. APPA contends that the Commission's proposed directive appears to have been covered under Reliability Standard IRO-005-1. EEI agrees, stating that IRO-005-1 already requires a reliability coordinator to ensure that transmission operators and balancing authorities operate to prevent action or non-action that will impact neighboring areas.[224]

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[223] Alcoa notes that this is consistent with the Requirements in TOP-001-1, which provides transmission operators and balancing authorities wide latitude to preserve reliability of their area.

[224] The Requirement R13 of IRO-005-1 provides that "[e]ach reliability coordinator shall ensure that Transmission Operators, Balancing Authorities … operate to prevent the likelihood that a disturbance, action or non-action in its Reliability Coordinator Area will result in a SOL or IROL violation in another area of the Interconnection."

(b) Commission Determination

519. The Commission reaffirms its belief that Reliable Operation of the Bulk-Power System can only be achieved by coordinated efforts of all operating entities, such as reliability coordinators, transmission operators and balancing authorities in operating their respective systems and performing their respective functions in accordance with their responsibilities and authorities. Most operating actions taken by transmission operators and balancing authorities in real-time would only affect their own areas and equipment and have no adverse impacts on the interconnection reliability operating limits, and therefore they have unilateral authority to act. However some operating actions that would have impacts beyond their own areas must involve the reliability coordinator who has the wide-area views and the necessary operating tools, including monitoring facilities and real-time analytic tools with wide-area representation to enable the reliability coordinator to fulfill its responsibility.[225] In response to Alcoa, the Commission believes that actions that have an impact beyond an area will, in general, vary based on the conditions at the time of the action.

520. Further, we clarify that we did not propose to require an entity to inform its reliability coordinator of every action it takes. Instead, the proposed directive included a Requirement for the reliability coordinator to assess and approve only those actions that have impacts beyond the area views of transmission operators and balancing authorities. We remain convinced that it is the reliability coordinator's responsibility to ensure Reliable Operation of its reliability coordinator area. The reliability coordinator must also ensure that actions taken by operating entities under its authority will not have wide-area impacts that would adversely impact Reliable Operation of the Bulk-Power System. Therefore, we adopt the proposed directive as stated in the NOPR.

521. In response to commenters, the Commission clarifies that the proposed directive does not conflict with the transmission operators' and balancing authorities' rights to take actions necessary to preserve reliability of their areas and alleviate operating

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[225] The NERC glossary states that A reliability coordinator is the "entity that is the highest level of authority who is responsible for the reliable operation of the bulk electric system, has the wide-area view of the bulk electric system, and has the operating tools, processes and procedures, including the authority to prevent or mitigate emergency operating situations in both next-day analysis and real-time operations. The reliability coordinator has the purview that is broad enough to enable the calculation of IROLs, which may be based on the operating parameters of transmission systems beyond any transmission operator's vision." NERC Glossary at 15.

emergencies, consistent with Requirement R1 and R2 in TOP-001-1.[226] Further, the proposed directive does not in any way diminish their operating authority regarding local area reliability for normal and emergency situations, a responsibility that is under the responsibility of a transmission operator or a balancing authority. However, the majority of their operating actions are not emergency actions and would only affect a transmission operator's or balancing authority's area of responsibilities. Since these actions are expected to have little impact outside of the transmission operator's or balancing authority's area, the authority to take unilateral actions remains with the transmission operator or balancing authority. Other non-emergency actions should be coordinated with the reliability coordinator prior to taking action.

522. Regarding SDG&E's concern that serious damage to transmission equipment could occur if the transmission operator is not able to take immediate action during an emergency, we believe this is adequately addressed under Requirement R3 of TOP-001-0 which provides that operating entities need not comply with directives from reliability coordinators when such actions would violate safety, equipment, regulatory or statutory requirements.

523. NERC should consider Xcel's suggestion that the entity taking operating actions should not be held responsible for delays caused by the reliability coordinator's assessment and approval in the Reliability Standards development process. We note that the operating entity has the authority to take emergency actions to protect its system that may circumvent or preempt the reliability coordinator's approval process under TOP-001-1 Requirement R3 in cases of personnel safety, potential equipment failure or environmental needs.

524. We disagree with commenters that the Commission's proposed directive is already covered under Requirement R13 of IRO-005-1, which requires each reliability coordinator to ensure that all transmission operators, balancing authorities and others operate to prevent the likelihood that a disturbance, action, or non-action in its reliability coordinator area will result in a SOL and IROL violation in another area of the Interconnection. In order for the reliability coordinator to carry out its function under IRO-005-1, it must have information from the transmission operators and balancing authorities. However, IRO-005-1 does not require transmission operators and balancing authorities to provide the reliability coordinator with the information it would need to

[226] TOP-001-1, R1 states in part "Each transmission operator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability of its area ...." and R2 states in part "Each transmission operator shall take immediate actions to alleviate operating emergencies ...."

prevent the likelihood that an action from these two entities will result in a SOL or IROL violation in another area of the Interconnection. The Commission's directive ensures that the reliability coordinator has such information. Therefore, we do not believe that COM-002-2 is duplicative of IRO-005-1.

525. Accordingly, we direct the ERO to include a Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area views of transmission operators or balancing authorities, including how to determine whether an action needs to be assessed by the reliability coordinator. This Requirement is best developed under the Reliability Standards development process including the consideration whether this Requirement should be included in this communications Reliability Standard or an operating Reliability Standard.

iv. Tightened Communications Protocols

526. The Blackout Report cited ineffective communications as a factor common to the August 14, 2003 blackout and other previous major outages in North America.[227] In addition, Recommendation No. 26 of the Blackout Report instructed NERC, working with reliability coordinators and control area operators, to "[t]ighten communications protocols, especially for communications during alerts and emergencies...."[228] In the NOPR, the Commission endorsed Blackout Recommendation No. 26 and proposed to direct the ERO to require tightened communications protocols, especially for communications during alerts and emergencies. Alternatively, we proposed to direct the ERO to develop a new Reliability Standard that responds to the Blackout Report Recommendation.

(a) Comments

527. In its response to the Staff Preliminary Assessment, NERC agreed with the need to develop additional Reliability Standards addressing consistent communications protocols among personnel responsible for the reliability of the Bulk-Power System.[229]

528. EEI supports the Commission in its concerns regarding Blackout Recommendation No. 26 on emergency communications. However, EEI states that

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[227] Blackout Report at 107.

[228] Id. at 141.

[229] NOPR at P 255.

Requirement R4 of EOP-001-0, Emergency Operations Planning, addresses the Commission's concerns about communication protocols during emergency conditions.[230] EEI recommends that, instead of duplicating the same requirement in COM-002-2, the Commission should consider directing NERC to provide an interpretation on the elements of such protocols.

529. APPA believes that the communications protocols to be used during emergencies should be included in the relevant Reliability Standard that governs each type of emergency, rather than in COM-002-2. For example, Requirement R3 of Reliability Standard VAR-002-1 establishes the protocol for communication with the transmission operator if a generator loses its ability to provide voltage control. By keeping the necessary communication protocols clustered with the events to which they apply, NERC would make the Reliability Standards more user-friendly.

530. MISO claims that Blackout Report Recommendation No. 26 on tightened communications protocols dealt primarily with NERC infrastructure and has been fully implemented. It is concerned that developing measures that require ongoing administration will impede rather than improve timely communications in an emergency.

(b) Commission Determination

531. We adopt our proposal to require the ERO to establish tightened communication protocols, especially for communications during alerts and emergencies, either as part of COM-002-2 or as a new Reliability Standard. We note that the ERO's response to the Staff Preliminary Assessment supports the need to develop additional Reliability Standards addressing consistent communications protocols among personnel responsible for the reliability of the Bulk-Power System.

532. While we agree with EEI that EOP-001-0, Requirement R4.1 requires communications protocols to be used during emergencies, we believe, and the ERO agrees, that the communications protocols need to be tightened to ensure Reliable Operation of the Bulk-Power System. We also believe an integral component in tightening the protocols is to establish communication uniformity as much as practical on a continent-wide basis. This will eliminate possible ambiguities in communications

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[230] EOP-001-0, Requirement R4 provides, in relevant part, that: "[e]ach Transmission Operator and Balancing Authority shall have emergency plans that will enable it to mitigate operating emergencies. At a minimum, Transmission Operator and Balancing Authority emergency plan shall include [c]ommunication protocols to be used during emergencies."

during normal, alert and emergency conditions. This is important because the Bulk-Power System is so tightly interconnected that system impacts often cross several operating entities' areas.

533. Regarding APPA's suggestion that it may be beneficial to include communication protocols in the relevant Reliability Standard that governs those types of emergencies, we direct that it be addressed in the Reliability Standards development process.

534. In response to MISO's contention that Blackout Report Recommendation No. 26 has been fully implemented, we note that Recommendation No. 26 addressed two matters. We believe MISO is referring to the second part of the recommendation requiring NERC to "[u]pgrade communication system hardware where appropriate" instead of tightening communications protocols. While we commend the ERO for taking appropriate action in upgrading its NERCNet, we remind the industry to continue their efforts in addressing the first part of Blackout Recommendation No. 26.

535. Accordingly, we direct the ERO to either modify COM-002-2 or develop a new Reliability Standard that requires tightened communications protocols, especially for communications during alerts and emergencies.

v. Other Issues

(a) Comments

536. Santa Clara requests clarification whether the phrase "Such communications shall be staffed and available" in Requirement R1 applies only to operating staff available on site at all times or includes repair personnel who are available only on an on-call basis.

537. FirstEnergy asks that the Reliability Standard specify what is meant by "staffed" and states that the term should not require a physical presence at all facilities at all times because some units, such as peaking units, are not staffed 24 hours a day. In addition, FirstEnergy suggests that, because nuclear units are already subject to communications requirements in their operating procedures, their compliance with NRC operating procedures should be deemed in compliance with the NERC Reliability Standards.

538. Similarly, Six Cities states that, to avoid unnecessary staffing burdens, particularly for smaller entities, the Commission should direct NERC to clarify COM-002-2 by providing that identification of an emergency contact person on call to respond to real-time emergency conditions will constitute adequate compliance.

(b) Commission Determination

539. Santa Clara, FirstEnergy and Six Cities suggest specific new improvements to the Reliability Standards. As stated above, such comments should be considered as the ERO modifies the Reliability Standards in the Reliability Standards development process.

vi. Summary of Commission Determination

540. While the Commission identified concerns regarding COM-002-2, the proposed Reliability Standard serves an important purpose by requiring users, owners and operators to implement the necessary communications and coordination among entities. Accordingly, the Commission approves Reliability Standard COM-002-2 as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to COM-002-2 through the Reliability Standards development process that: (1) expands the applicability to include distribution providers as applicable entities; (2) includes a new Requirement for the reliability coordinator to assess and approve actions that have impacts beyond the area view of a transmission operator or balancing authority[231] and (3) requires tightened communications protocols, especially for communications during alerts and emergencies. Alternatively, with respect to this final issue, the ERO may develop a new Reliability Standard that responds to Blackout Report Recommendation No. 26 in the manner described above. Finally, we direct the ERO to include APPA's suggestions to complete the Measures and Levels of Non-Compliance in its modification of COM-002-2 through the Reliability Standards development process.

4. EOP: Emergency Preparedness and Operations

541. The Emergency Preparedness and Operations (EOP) group of proposed Reliability Standards consists of nine Reliability Standards that address preparation for emergencies, necessary actions during emergencies and system restoration and reporting following disturbances.

a. Emergency Operations Planning (EOP-001-0)

542. NERC's proposed Reliability Standard EOP-001-0 requires each transmission operator and balancing authority to develop, maintain and implement a set of plans to

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[231] This Requirement could, for example, be included in COM-002-2 or in an operating Reliability Standard.

mitigate operating emergencies. These plans must be coordinated with other transmission operators and balancing authorities and the reliability coordinator.

543. In the NOPR, the Commission proposed to approve Reliability Standard EOP-001-0 as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission proposed to direct that NERC submit a modification to EOP-001-0 that: (1) includes the reliability coordinator as an applicable entity with responsibilities as described above; (2) clarifies the 30-minute requirement in Requirement R2 of the Reliability Standard to state that load shedding should be capable of being implemented as soon as possible and much less than 30 minutes and (3) includes definitions of system states to be used by the operators, such as transmission-related "normal," "alert," and "emergency" states, provides criteria for entering into these states and identifies the authority that will declare these states.

544. Most of the comments address the specific modifications and concerns raised by the Commission in the NOPR. Below, we address each topic separately, followed by an over-all conclusion and summary.

i. Applicability to reliability coordinators

(a) Comments

545. MRO states that it is necessary to include reliability coordinators as applicable entities because reliability coordinators have a wide-area view. FirstEnergy also supports making the proposed Reliability Standard applicable to the reliability coordinator. FirstEnergy states the reliability coordinator should take an active role and should have clearly defined, specific responsibilities for coordinating and implementing emergency operations plans. In addition, FirstEnergy states that inclusion of the reliability coordinator as an applicable entity removes ambiguity that may exist concerning the reliability coordinator's role and its responsibilities during restoration activities.

546. SoCal Edison agrees that certain aspects of EOP-001-0 should be applicable to reliability coordinators; however, it proposes that NERC, through the stakeholder process, should receive input from stakeholders on which requirements should be exclusive to the transmission operator or balancing authority with the reliability coordinator responsible only for collecting and incorporating this information into its overarching plan. MISO, on the other hand, questions the need for the proposed modification, contending that the reliability coordinators have parallel responsibilities laid out in other EOP Reliability Standards.

(b) Commission Determination

547. In the NOPR, we stated that the proposed Reliability Standard applies to transmission operators and balancing authorities, that the applicability portion of the Reliability Standard is sufficiently clear as to who must comply with the filed version of the Reliability Standard and that the Reliability Standard can be enforced against these entities.[232] However, we recognized commenters' concerns that the Reliability Standard does not assign a role to the reliability coordinator, which is the highest level of authority responsible for reliable operation of the Bulk-Power System and which has a wide-area view. MISO contends that EOP-001-0 need not apply to reliability coordinators because they have parallel responsibilities in other EOP Reliability Standards. We disagree. Given the importance NERC attributes to the reliability coordinator in connection with matters covered by EOP-001-0, the Commission is persuaded that specific responsibilities for the reliability coordinator in the development and coordination of emergency plans must be included as part of this Reliability Standard. While balancing authorities and transmission operators are capable of developing, maintaining and implementing plans to mitigate operating emergencies for their specific areas of responsibility, unlike reliability coordinators, they do not have wide-area views.

548. Further we agree with SoCal Edison that clear direction is needed on which requirements should be exclusive to transmission operators and balancing authorities with the reliability coordinator being responsible for incorporating this information into its overarching plan. Accordingly, the Commission finds the reliability coordinator is a necessary entity under EOP-001-0 and directs the ERO to modify the Reliability Standard to include the reliability coordinator as an applicable entity. In addition, the ERO should consider SoCal Edison's suggestion in the ERO's Reliability Standards development process.

ii. Clarification of the 30-minute Load Shedding Requirement

(a) Comments

549. NERC comments that the proposed directive to clarify the 30-minute requirement in Requirement R2 presumes that all manual load shedding can be performed by supervisory control. It states that, in many systems, shedding load requires actions by field personnel who must be dispatched to a site. NERC recognizes the reliability benefit of being able to shed greater amounts of load in seconds or minutes but contends that the

[232] NOPR at P 272.

amount of load shedding under remote supervisory control and the timing requirements should be vetted through industry experts based on good utility practice. While acknowledging that the proposed modification is appropriate because it corresponds to current good utility practice and widely held interpretations of the requirement to shed load, FirstEnergy, like NERC, notes that load that does not have SCADA cannot be shed within 30 minutes because field staff must be dispatched. It proposes that the Reliability Standard should specify that, for loads that do not have SCADA, the implementation plan must be initiated, but not necessarily completed, within 30 minutes. Similarly, MidAmerican is concerned that if load shedding is to be performed in much less than 30 minutes it will require automatic load shedding which may trigger when not required leading to less reliability under certain conditions. MidAmerican proposes a modification to specifically permit load shedding with non-automatic schemes.

550. Xcel states that the proposed modification is unnecessary because there are many different options besides load shedding that could be implemented to alleviate IROL violations within 30 minutes. It adds that load shedding is the option of last resort and that the timing for implementation of load shedding would be better addressed in proposed Reliability Standard EOP-003-1. EEI and California PUC state that not all load reduction schemes should be required to be operable within 30 minutes; only those used for emergency operations. APPA states that the 30-minute interval was selected based on industry consensus and, rather than dismiss this consensus, the Commission should instruct NERC to reconsider the 30-minute requirement and either modify it or better explain why it is the appropriate time period for the requirement. MISO questions what would be achieved by the proposed modification and states that operators do not intentionally delay taking action when required.

551. International Transmission and PG&E state that shedding load "as soon as possible and much less than 30 minutes" is vague and unenforceable. International Transmission proposes shedding of load "as soon as possible when required to mitigate an IROL violation, but in no case in more than 30 minutes."

(b) Commission Determination

552. The proposed Reliability Standard states that the transmission operator shall have an emergency load reduction plan for all identified IROLs and that the load reduction plan must be capable of being implemented within 30 minutes. In the NOPR, we proposed to direct NERC to modify EOP-001-0 to clarify the 30-minute requirement in Requirement R2 to state that load shedding should be capable of being implemented as

soon as possible and in much less than 30 minutes.[233] The intent was to have a requirement that precludes waiting until the 29th minute to begin implementation.

553. In response to the concerns of commenters, the Commission clarifies that the proposed modification does not require that SCADA or its equivalent be installed for all loads. Rather, SCADA would be required only for those loads necessary to mitigate IROL violations and to maintain reliable operations. As we stated in the NOPR, the Commission understands that it is not the intent of the Reliability Standard to require the shedding of all available load within 30 minutes, but rather only the amount necessary to correct system emergencies.[234] Thus the Commission agrees with EEI and California PUC that not all load reduction schemes should be required to be operable within 30 minutes but only those used for emergency operations.

554. Further, as Xcel recognizes, load shedding is the option of last resort and there may be other options available to alleviate IROL violations within 30 minutes. The ERO should consider these other options as it works through the Reliability Standards development process to modify EOP-001-0.

555. With regard to the wording of the proposed modification stating that load shedding should be capable of being implemented "as soon as possible and in much less than 30 minutes," the Commission agrees with PG&E and International Transmission that this language may be unclear and unduly subjective. In the NOPR, we stated that the reference to 30 minutes could suggest that anything up to that limit was acceptable and proposed the modification to emphasize our concern that implementation was expected much sooner than in 30 minutes. International Transmission's suggested rewording addresses our concern. Accordingly, we direct the ERO to develop a modification through the Reliability Standards development process clarifying that when the load reduction plan of Requirement R2 involves load shedding, such load shedding be capable of being implemented as soon as possible when required to mitigate an IROL violation but in no case in more than 30 minutes.

556. Finally, in response to APPA's comments, as stated in the NOPR,[235] the Commission accepts the 30 minute requirement as a reasonable period within which operators should return the system to a reliable operating state. However in order to

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[233] Id. at P 273.

[234] Id.

[235] Id. at P 995.

satisfy this Requirement, when load shedding is the only viable option, the Commission believes that operators must have the capability through SCADA or other equivalent means to shed appropriate amounts of load in the desired locations as soon as possible to mitigate IROL violations but in no case in more than 30 minutes.[236]

iii. Definitions of System States

(a) Comments

557. FirstEnergy states that it may be difficult to define system states that cover all operating conditions, but nonetheless recognizes that the standardization of these states is a first step to bringing clarity to operators concerning system conditions and the resulting actions they are expected to take. California PUC, on the other hand, states that imposing uniform definitions for "normal," "alert" and "emergency" states is impractical and counterproductive. California PUC claims that trying to define in advance all contingencies that the system may face is probably infeasible and argues that improved real-time monitoring of the grid is the preferred approach for quick identification and correction of problems.

558. ISO-NE states that it is important to define system states but that such definitions should not be implemented until a "pilot program" is field tested. ISO-NE explains that after such a pilot program is conducted operators would need to make changes to their policies and procedures, including operator training, to make sure that their practices are administered in a secure and well-understood fashion.

(b) Commission Determination

559. In the NOPR, the Commission stated that clearly defined system states incorporated into real-time operation can significantly improve operator recognition of emergency conditions, rapid and accurate response and recovery to normal system conditions.[237]

560. The Commission recognizes that the triggering events and the nature of the emergency states may be different for different systems; however, we find that a clearly defined set of system states will help operators proactively avert escalations of system disturbances and cascading outages. Further, operators, the ERO and regulators will

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[236] Id.

[237] Id. at P 275.

better understand how reliably the system is operating and how it performed historically if statistics can be collected based on well-defined system states. We find it reasonable for the ERO, through the stakeholder process, to develop a well-defined set of uniform, continent-wide system states that can be understood by transmission operators, balancing authorities, reliability coordinators and the ERO to correspond to specific, predetermined levels of urgency.

561. As we noted in the NOPR, some control areas define and effectively use more than the "normal," "alert" and "emergency" system states included in the Blackout Report recommendation.[238] We proposed that the ERO determine the optimum number of system states to be employed continent-wide and to consider the addition of the restoration state.[239] Accordingly, we direct the ERO to determine the optimum number of continent-wide system states and their attributes and to modify the Reliability Standard through the Reliability Standards development process to accomplish this objective.

562. Further, we agree with ISO-NE that the proposed modification should be field-tested and that policies and procedure be put in place, including operator training, before any processes for continent-wide system states are implemented. Such testing will help assure that all applicable entities and their personnel understand how the terms will be used and will allow operators to train staff to make any necessary changes to their policies and procedures. We direct the ERO to consider such a pilot program as it modifies EOP-001-0 through the Reliability Standards development process.

iv. Other issues

(a) Comments

563. ISO-NE raises two additional concerns with the proposed Reliability Standard. First, it states that activities outlined in Requirement R7.4, including coordinating fuel conservation and arranging for fuel deliveries, are not functions that independent transmission operators and balancing authorities typically perform. Second, ISO-NE notes that Requirement R5 provides that each transmission operator and balancing authority must include applicable elements of Attachment 1 of EOP-001-0 in an emergency plan. However, according to ISO-NE, the elements identified in Attachment 1 are characterized as "for consideration" and are not mandatory. ISO-NE argues that the proposed Reliability Standard should be clarified to indicate that the actual emergency

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[238] Id. at P 276.

[239] Id.

plan elements, and not the "for consideration" elements of Attachment 1, should be the basis for compliance.

(b) Commission Determination

564. With regard to ISO-NE's concern that certain activities outlined in Requirement R7.4 are not functions normally performed by independent transmission operators and balancing authorities, the Commission understands that this Requirement covers either delivery of fuel or delivery of electrical energy from remote systems. While arranging for fuel deliveries may be outside of the functions that ISOs and RTOs perform, the requirement to arrange deliveries of electrical energy from remote systems is a function they normally perform. Because an ISO or RTO may choose to either deliver fuel or electrical energy from remote systems, Requirement R7.4 will not burden ISOs and RTOs with functions they do not normally perform.

565. The Commission agrees with ISO-NE that the Reliability Standard should be clarified to indicate that the actual emergency plan elements, and not the "for consideration" elements of Attachment 1, should be the basis for compliance. However, all of the elements should be considered when the emergency plan is put together.

v. Summary of Commission Determination

566. Accordingly, the Commission concludes that Reliability Standard EOP-001-0 is just, reasonable, not unduly discriminatory or preferential and in the public interest and approves it as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to EOP-001-0 through the Reliability Standards development process that: (1) includes the reliability coordinator as an applicable entity with responsibilities as described above; (2) clarifies the 30-minute requirement in Requirement R2 of the Reliability Standard to state that load shedding should be capable of being implemented as soon as possible but in no more than 30 minutes; (3) includes definitions of system states to be used by the operators, such as transmission-related "normal," "alert" and "emergency" states, provides criteria for entering into these states, and identifies the authority that will declare these states and (4) clarifies that the actual emergency plan elements, and not the "for consideration" elements of Attachment 1, should be the basis for compliance. Further, the Commission directs the ERO to consider a pilot program for system states, as discussed above.

b. Capacity and Energy Emergencies (EOP-002-2)

567. EOP-002-2 applies to balancing authorities and reliability coordinators and is intended to ensure that they are prepared for capacity and energy emergencies.[240] The Reliability Standard requires that balancing authorities have the authority to bring all necessary generation on line, communicate about the energy and capacity emergency with the reliability coordinator and coordinate with other balancing authorities. EOP-002-2 includes an attachment that describes an emergency procedure to be initiated by a reliability coordinator that declares one of four energy emergency alert levels to provide assistance to the LSE.

568. In the NOPR, the Commission proposed to approve the Reliability Standard as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission proposed to direct that NERC submit a modification to the Reliability Standard that: (1) addresses emergencies resulting not only from insufficient generation but also from insufficient transmission capability, including situations where insufficient transmission impacts the implementation of the capacity and energy emergency plan; (2) identifies DSM in Requirement R6 as one possible remedy that a balancing authority may use to bring it in compliance with control performance and disturbance control Reliability Standards and (3) includes a clear warning that the TLR procedure is an inappropriate and ineffective tool to mitigate IROL violations or for use in emergency situations.

569. Most of the comments address the specific modifications and concerns raised by the Commission in the NOPR. Below, we address each topic separately, followed by an over-all conclusion and summary.

i. Insufficient Transmission Capability

(a) Comments

570. MRO believes that the definition for the term "insufficient transmission capability" should be clarified because insufficient transmission capability could be due to a thin spot in the interconnection, prior outages or storm damage.

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[240] In its November 15, 2006, filing, NERC submitted EOP-002-2, which supercedes the Version 1 Reliability Standard. EOP-002-2 adds Measures and Levels of Non-Compliance to the Version 0 Reliability Standard. In this Final Rule, we review the November version, EOP-002-2.

(b) Commission Determination

571. As we stated in the NOPR, neither EOP-002-2 nor any other Reliability Standard addresses the impact of inadequate transmission during generation emergencies.[241] The Commission agrees with MRO that "insufficient transmission capability" could be due to various causes. The ERO should examine whether to clarify this term in the Reliability Standards development process.

ii. Demand-Side Management

(a) Comments

572. FirstEnergy states that it is appropriate to include demand-side resources as another tool for balancing authorities to use in meeting control performance and disturbance control Reliability Standards. It states, however, that in order to qualify, the demand-side resource options must meet similar technical requirements as generation resource options. Comverge recommends that the terms "demand response" and "curtailable loads" be specifically added to R3, R4 and R6.3 and Alert Level 1 to ensure that they are included in the list of resources that will be controlled during capacity and energy emergencies. APPA contends that Requirement R6.6 adequately accounts for the use of demand-side remedies to address emergencies. As such, APPA opposes the Commission's proposal as being unduly prescriptive. Also ISO-NE contends that the proposed modifications effectively dictate a specific means to solve the underlying problems instead of leaving it to the responsible entities to determine how to achieve the reliability objective. A proper recommendation would be to make the requirement resource-neutral.

(b) Commission Determination

573. The Commission agrees with FirstEnergy that for demand-side resources to qualify as another tool for balancing authorities to use in meeting control performance and disturbance control Reliabilty Standards, they must meet comparable technical performance requirements as generation resource options. In response to comments from Comverge and APPA, the Commission believes that curtailable loads are adequately addressed in Requirement R6 of the Reliability Standard but that demand response is not

[241] NOPR at P 284.

covered.[242] Demand response covers considerably more resources than interruptible load. Accordingly, the Commission directs the ERO to modify the Reliability Standard to include all technically feasible resource options in the management of emergencies. These options should include generation resources, demand response resources and other technologies that meet comparable technical performance requirements.

iii. Warning regarding TLR procedure

(a) Comments

574. MRO states that it is very important that all concerned parties realize that TLR is not a first line of defense to mitigate IROL violations. Entergy and MidAmerican agree that TLR procedures are not effective to mitigate IROL violations or for use in emergency situations. EEI supports the Commission's proposed modifications to the Reliability Standard; however, EEI along with Entergy, MidAmerican and APPA, believes that the TLR process is effective in avoiding and mitigating potential IROL violations. These commenters request that the Commission clarify the proposed modification so that it does not foreclose such use of the TLR process.

575. International Transmission states that TLR can be an effective and appropriate means to mitigate IROL violations or for use in emergency situations and therefore EOP-002-2 should not preclude the use of TLR when its use is warranted. MISO states that, while TLR is not the preferred method of responding to emergencies, an operator should not be precluded from implementing TLR during emergencies. It argues that TLR may be appropriate when events develop slowly or when an entity is affected by external transactions and has exhausted all control actions or needs to reserve some control actions for contingencies.

576. APPA contends that the specific direction provided in this proposed modification intrudes on NERC's role as a standard setting agency and would be better framed as a direction to NERC to investigate the concern and revise the Reliability Standard accordingly. Similarly, while ISO-NE supports the Commission's conclusion that reliance on TLR procedures can be inappropriate, it recommends that the proposed Reliability Standard would be improved if it did not specify the operating method required to achieve compliance. ISO-NE also believes that the Commission should direct

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[242] Requirement R6 provides, in pertinent part: "R6. If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to: R6.3. Interrupting interruptible load and exports."

NERC to allow the responsible entities flexibility in the means by which they achieve compliance with the Reliability Standard.[243]

(b) Commission Determination

577. A number of commenters agree that the TLR procedure is an inappropriate and ineffective tool for mitigating actual IROL violations or for use in emergency situations.[244] On the other hand, International Transmission believes the TLR procedure can be an appropriate and effective tool to mitigate IROL violations or for use in emergency situations and MISO argues that operators should not be precluded from implementing the TLR procedure during emergencies. The Commission disagrees. As explained in the NOPR and in the Blackout Report, actions undertaken under the TLR procedure are not fast and predictable enough for use in situations in which an operating security limit is close to being, or actually is being, violated. As such the Commission cannot agree with International Transmission and MISO. However, the Commission agrees with APPA, EEI, Entergy and MidAmerican that the TLR procedure may be appropriate and effective for use in managing potential IROL violations. Accordingly, the Commission will maintain its direction that the ERO modify the Reliability Standard to ensure that the TLR procedure is not used to mitigate actual IROL violations.

578. As to APPA's comment that we are intruding on NERC's role as a standard-setting agency, we have authority to direct the ERO to submit a modification and, in this instance, requiring the ERO to "investigate the concern" first is unnecessary. The issue is narrowly-framed and the comments identify no points requiring the approach suggested by APPA. In response to ISO-NE, we are precluding use of TLR procedures at times of actual IROL violations, but are not otherwise specifying permissible responses.

iv. Other issues

579. ISO-NE states that Requirement R2 essentially requires the same actions covered by ISO-NE Operating Procedure No. 4. ISO-NE is concerned that a strict approach to auditing compliance with the Reliability Standard could result in a finding that ISO-NE was in violation of the Reliability Standard if it skipped a particular action under its emergency plan even though that action was not called for under ISO-NE procedures. ISO-NE requests that the Commission direct NERC to clarify that a system operator has

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[243] ISO-NE also notes that in the first line of Requirement R7 the reference to "R7" should be to "R6."

[244] See, e.g., APPA, EEI, Entergy and MidAmerican.

discretion not to implement every action specified in its capacity and energy emergency plans when other appropriate actions are possible.

580. FirstEnergy claims that Requirement R1 may impose overlapping obligations and authority on reliability coordinators and balancing authorities who may have the same, partial or whole footprint and who are both likely to respond to the same emergency.

581. APPA notes that revised Reliability Standard EOP-002-2, filed by NERC on November 15, 2006, includes new Measures for some of the requirements but not all the requirements. APPA states that NERC should be directed to include Measures related to Requirements R4, R5, R6, R7 and R9.1.

(a) Commission Determination

582. The Commission finds that the issues raised by ISO-NE should be addressed through the Reliability Standards development process. As to FirstEnergy's concern with Requirement R1, the reliability coordinator has the highest level of authority. Accordingly, the Commission directs that the ERO, through the Reliability Standards development process, address ISO-NE's concern. Further, we direct the ERO to consider adding Measures and Levels of Non-Compliance in the Reliability Standard.

v. Summary of Commission Determination

583. Accordingly, the Commission approves Reliability Standard EOP-002-2 as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to EOP-002-2 through the Reliability Standards development process that: (1) addresses emergencies resulting not only from insufficient generation but also from insufficient transmission capability particularly where this affects the implementation of the capacity and energy emergency plan; (2) includes all technically feasible resource options, including demand response and generation resources, in the management of emergencies and (3) ensures that the TLR procedure is not used to mitigate actual IROL violations.

c. Load Shedding Plans (EOP-003-1)

584. EOP-003-1 deals with load shedding plans and requires that balancing authorities and transmission operators operating with insufficient transmission and generation capacity have the capability and authority to shed load rather than risk a failure of the

Interconnection.[245] It includes requirements to establish plans for automatic load shedding for underfrequency or undervoltage, manual load shedding to respond to real-time emergencies and communication with other balancing authorities and transmission operators.

585. In the NOPR, the Commission proposed to approve the Reliability Standard as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission proposed to direct that NERC submit a modification to EOP-003-0 that: (1) specifies the minimum load shedding capability that should be provided and the maximum amount of delay before load shedding can be implemented; (2) requires periodic drills of simulated load shedding and (3) contains Measures and Levels of Non-Compliance.

586. Most of the comments address the specific modifications and concerns raised by the Commission in the NOPR. Below, we address each topic separately, followed by an over-all conclusion and summary.

i. Minimum load shedding and maximum delay

(a) Comments

587. FirstEnergy and APPA agree that NERC should modify EOP-003-1 to specify the minimum load shedding capability and the maximum amount of delay. However, FirstEnergy adds that Requirement R8, which states that load shedding actions must be taken in a "time frame adequate for responding to the emergency," is ambiguous and difficult to substantiate. NERC acknowledges that significant improvements can be made to the EOP Reliability Standards to establish criteria for the provision of load shedding capability, but it states that requiring a specific minimum amount of load (MW) or percentage of load that must be capable of being shed and the maximum amount of time delay is as likely to reduce reliability as it is to increase it. NERC contends that the electric characteristics of local systems and loads must be considered in designing manual and automatic load shedding capabilities. Accordingly, it proposes that the Commission direct NERC to review industry best practices and propose requirements in the Reliability Standards to ensure that adequate load shedding capabilities are provided to protect the

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[245] In its November 15, 2006, filing, NERC submitted EOP-003-1, which supercedes the Version 0 Reliability Standard. EOP-003-1 adds Measures and Levels of Non-Compliance to the Version 0 Reliability Standard. In this Final Rule, we review the November version, EOP-003-1.

Bulk-Power System without causing adverse impacts associated with unnecessary shedding of firm load.

588. SoCal Edison states that in certain circumstances, but not in all cases, it would be valuable to have a minimum limit established for the amount of load shedding an entity is to accomplish. It suggests that the specific requirements should be derived based on studied conditions.

589. Xcel, ISO-NE, TVA and International Transmission do not support a nationwide Reliability Standard for minimum load shedding and maximum delay for implementing load shedding because there are large variations in load, resources and system configuration and characteristics across the continent. TVA states that these parameters should be determined based on studies of the specific transmission systems and applicable contingency events. MISO states that it is not clear what is intended or achieved by this requirement because balancing authorities and transmission operators should already have the ability to shed, by some means, all load within their area and the timing requirements are specified in the IROL-related Reliability Standards.

590. California PUC is concerned that the proposed modification assumes that load shedding at the transmission level is the only or the primary way to address system emergencies. SDG&E recommends that the maximum delay for shedding load should begin when the transmission operator or balancing authority has actual knowledge of the circumstances that would precipitate load shedding.

(b) Commission Determination

591. Shedding of firm load is an operating measure of last resort to contain system emergencies and prevent cascading. System operators must have the capability to shed load in a timely manner to return the system to a stable condition. The Commission disagrees with NERC's contention that requiring a specific minimum amount of load that must be capable of being shed and the maximum amount of delay is as likely to reduce reliability as it is to increase it. As stated in the NOPR, the actual amount of load to be shed, the location and the time frame will be at the discretion of the system operator based on the nature of the system problem and the operator's assessment of corrective actions required.[246] However, if the capability to shed sufficient load in locations where it is required and in a timely manner is not available to the system operator, then the risk of uncontrolled failure of system elements or cascading outages is increased.

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[246] NOPR at P 294.

592. While the Reliability Standard requires transmission operators and balancing authorities to be capable of load shedding in a time frame adequate for responding to emergencies, this could be clearer, as noted by FirstEnergy. As mentioned by NERC, significant improvements can be made to the Reliability Standard to establish criteria for the provision of load shedding capability. We agree.

593. Several commenters state that they do not support a nationwide Reliability Standard for minimum load shedding capability and maximum delay in implementing load shedding because these parameters are dependent on system configurations and load and resource characteristics across the continent, and as such, must be determined based on system studies.[247] The Commission agrees that the minimum load shedding capability must take into account system characteristics and topology, however the maximum time delay before load shedding can be implemented is independent of system characteristics and is governed by what is considered to be feasible.

594. California PUC is concerned that the proposed modification on load shedding assumes that load shedding at the transmission level is the only or preferred way to address system emergencies. The Commission clarifies that this assumption is incorrect and agrees with California PUC that load shedding at the distribution level has the minimum societal and economic impact.

595. The Commission concludes that the Reliability Standard needs to be modified to ensure that adequate load shedding capabilities are provided so that system operators have an effective operating measure of last resort to contain system emergencies and prevent cascading. The Commission recognizes that the amount of load shedding capability required is dependent on system characteristics and therefore it may not be feasible to have a uniform nationwide load shedding capability. This, however, does not preclude a uniform nationwide criterion on the methodology for establishing load shedding capability that would specify the minimum amount of load shedding capability that should be provided based on system characteristics and conditions and the maximum amount of delay before load shedding can be implemented. The Commission directs the ERO to address the minimum load and maximum time concerns of the Commission through the Reliability Standards development process. We suggest that a review of industry best practices would be useful in developing nationwide critera.

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[247] See Xcel, ISO-NE, TVA, International Transmission and MISO.

ii. Periodic drills of simulated load shedding

(a) Comments

596. California PUC states that, since load shedding at the distribution level has the minimum societal and economic impact, the Reliability Standard should require all neighboring distribution or transmission utilities to participate in annual drills when requested by an ISO or other bulk power authority. Northern Indiana and FirstEnergy support mandating periodic drills of simulated load shedding; however, FirstEnergy states that the drill requirements should include simulated load shed via a simulator or table-top exercise, not an actual deployment of manpower, and that these drill requirements should be included in the PER-005-0 Reliability Standard instead of EOP-003-1. PER-005-0 only involves training of control room personnel, whereas these drills should also include testing the readiness and functionality of procedures and personnel outside of the control room.

(b) Commission Determination

597. As suggested by California PUC, periodic drills of simulated load shedding should involve all participants required to ensure successful implementation of load shedding plans. As such, the drills should extend beyond system operators to distribution operators and LSEs. The Reliability Standard should require periodic drills by entities subject to section 215, and require those entities to seek participation by other entities. The drills should test the readiness and functionality of the load shedding plans, including, at times, the actual deployment of personnel. Therefore the Commission disagrees with FirstEnergy that the requirement for periodic drills of simulated load shedding should be incorporated into the new PER-005-0 Reliability Standard that is currently being drafted to address operator training.

iii. Other issues

(a) Comments

598. Santa Clara states that since automatic load shedding for undervoltage conditions is not required in most parts of the West and possibly in other areas of the country, Requirement R2 should be modified to include the words "as applicable per the Regional Reliability Organization." In addition, APPA states that NERC should consider requiring balancing authorities and transmission operators to expand coordination and planning of their automatic and manual load shedding plans to include their respective Regional Entities, reliability coordinators and generation owners. ISO-NE proposes that NERC establish coordinated trip settings within and among balancing authorities for each interconnection.

599. While EEI generally supports the proposed modifications, it believes that the proposal for senior management to post letters to safeguard operators who shed load in accordance with approved guidelines does not respond to or meet the needs reflected in the Blackout Recommendation No. 8. EEI points out that, under other provisions of the FPA, the Commission has approved liability limiting provisions for some operators that appears to be consistent with the Blackout Report Recommendation No. 8, but has rejected other similar protections. EEI requests that the Commission explicitly state that transmission operators taking action in compliance with the load shedding provisions of Commission approved Reliability Standards will be protected from retaliatory actions, including legal actions.

(b) Commission Determination

600. Regarding Santa Clara's concern that undervoltage load shedding is not required in most parts of WECC and that Requirement R2 should be modified to reflect this, the Commission notes that Requirement R2 states that each transmission operator and balancing authority shall establish plans for automatic load shedding for underfrequency or undervolatge conditions. The Commission clarifies that the Reliability Standard does not mandate undervoltage load shedding unless needed for Reliable Operation.

601. We also note that APPA and ISO-NE raise issues regarding coordination of trip settings and automatic and manual load shedding plans. The Commission directs the ERO to consider these comments in future modification to the Reliability Standard through the Reliability Standards development process.

602. EEI seeks adoption of a provision to shield transmission operators from liability when they take action in compliance with the load shedding provisions of the Reliability Standards. Consistent with our discussion of Blackout Report Recommendation No. 8 in the Common Issues section of this Final Rule, the Commission will not adopt new liability protections.[248] According to the Task Force, no further action is needed to implement that recommendation because some states already have appropriate protection against liability suits.[249] Further, in Order No. 890, we have already declined to provide a uniform federal liability standard.

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[248] See Common Issues Pertaining to Reliability Standards: Blackout Report Recommendation on Liability Limitations, supra section II.E.1.

[249] US-Canada Power System Outage Task Force, Final Report on Implementation of Task Force Recommendations at 22 (Oct. 3, 2006), available at http://www.oe.energy.gov/news/blackout.htm ("In the United States, some state

(continued)

iv. Summary of Commission Determination

603. The Commission approves proposed Reliability Standard EOP-003-1 as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to EOP-003-1 through the Reliability Standards development process that: (1) includes a requirement to develop specific minimum load shedding capability that should be provided and the maximum amount of delay before load shedding can be implemented based on an overarching criteria that take into account system characteristics and (2) requires periodic drills of simulated load shedding.

d. Disturbance Reporting (EOP-004-1)

604. EOP-004-1 establishes requirements for reporting system disturbances to the regional reliability organization and the ERO.[250] It also establishes requirements for the analysis of these disturbances.

605. In the NOPR, the Commission proposed to approve the Reliability Standard as mandatory and enforceable. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission proposed to direct that NERC submit a modification to the Reliability Standard that: (1) includes any requirements necessary for users, owners and operators of the Bulk-Power System to provide data that will assist NERC in the investigation of a blackout or disturbance and (2) includes Measures and Levels of Non-Compliance.

i. Comments

606. EEI and FirstEnergy support the Commission's proposed modifications to the Reliability Standard. EEI states that data reporting requirements and other process requirements should be contained in enforceable Reliability Standards. FirstEnergy states that the proposed modification corresponds to good utility practice and that

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regulators have informally expressed the view that there is appropriate protection against liability suits for parties who shed load according to approved guidelines.")

[250] In its November 15, 2006, filing, NERC submitted EOP-004-1, which supercedes the Version 0 Reliability Standard. EOP-004-1 adds Measures and Levels of Non-Compliance to the Version 0 Reliability Standard. In this Final Rule, we review the November version, EOP-004-1.

explicitly stating the requirement to provide data to NERC brings clarity to the expectations of NERC and the Commission.

607. APPA is concerned about the scope of Requirement R2 because, in its opinion, Requirement R2 appears to impose an open-ended obligation on entities such as generation operators and LSEs that may have neither the data nor the tools to promptly analyze disturbances that could have originated elsewhere. APPA proposes that Requirement R2 be modified to require affected entities to promptly begin analyses to ensure timely reporting to NERC and DOE.

608. Xcel expresses concern regarding what constitutes a reportable event for each applicable entity and recommends that the Reliability Standard be revised to define what a reportable event is for each entity that has reporting obligations. Further, Xcel states that the requirement in Requirement R3.4 for a final report within 60 days may not be feasible given the current WECC process, which among other things, requires the creation of a group to prepare the report and a 30-day posting of a draft report before it becomes final. Xcel also states that if the ultimate purpose of the report is to provide information to avoid a recurrence of a system disturbance, then the Reliability Standard should be revised to require the distribution of the report to similarly situated entities.

609. FirstEnergy states that, since nuclear units have their own NRC reporting procedures covering the Requirements under EOP-004-1, the Reliability Standard should specify that compliance with such operating procedures is sufficient to satisfy the requirements of EOP-004-1. FirstEnergy also states that the title of this Reliability Standard should be changed to "Disturbance Event Reporting" to indicate that the events covered under this Reliability Standard include a broad range of events that go beyond the events for which reports may be required under Reliability Standard BAL-002-0.

610. APPA states that NERC's November 15, 2006 revision partially fulfills the proposed modification to include Measures and Levels of Non-Compliance. APPA notes that EOP-004-1 did not provide Measures for R2, R3.2, R3.4, R4 and R5.

ii. Commission Determination

611. Complete and timely data is essential for analyzing system disturbances. In the NOPR, the Commission proposed modifying this disturbance Reporting Standard to include requirements necessary for users, owners and operators of the Bulk-Power System to provide disturbance data, voice recordings and other information collected during the disturbance to assist NERC in the investigation of the blackout or