



133 FERC ¶ 61,150  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 40

[Docket No. RM09-18-000; Order No. 743]

Revision to Electric Reliability Organization Definition of Bulk Electric System

(Issued November 18, 2010)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Final Rule.

SUMMARY: In this Final Rule, pursuant to section 215 of the Federal Power Act (FPA),<sup>1</sup> the Federal Energy Regulatory Commission (Commission) adopts, with modifications, the proposal outlined in its March 18, 2010 Notice of Proposed Rulemaking to require the Electric Reliability Organization (ERO) to revise its definition of the term “bulk electric system.”<sup>2</sup> The Commission directs the ERO, through the ERO’s Reliability Standards Development Process, to revise the definition to address the Commission’s technical concerns, as discussed fully below, and ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The Commission believes that the best way to accomplish these goals is to eliminate the regional discretion in the current definition, maintain a bright-line threshold

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

<sup>2</sup> *Revision to Electric Reliability Organization Definition of Bulk Electric System*, Notice of Proposed Rulemaking, 75 FR 14097 (Mar. 24, 2010), FERC Stats. & Regs. ¶ 32,654 (2010).

that includes all facilities operated at or above 100 kV except defined radial facilities, and establish an exemption process and criteria for excluding facilities that are not necessary for operating the interconnected transmission network. However, this Final Rule allows the ERO, in accordance with Order No. 693, to develop an alternative proposal for addressing the Commission's concerns with the present definition with the understanding that any such alternative must be as effective as, or more effective than, the Commission's proposed approach in addressing the identified technical and other concerns, and may not result in a reduction in reliability.

EFFECTIVE DATE: This Final Rule will become effective [insert date that is 60 days from the date that this Final Rule is published in the **FEDERAL REGISTER**].

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133 FERC ¶ 61,150  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;  
Marc Spitzer, Philip D. Moeller,  
John R. Norris, and Cheryl A. LaFleur.

Revision to Electric Reliability Organization Definition of Bulk Electric System      Docket No. RM09-18-000

ORDER NO. 743

FINAL RULE

(Issued November 18, 2010)

1. In this Final Rule, pursuant to section 215 of the FPA,<sup>3</sup> the Commission adopts, with modifications described below, the proposal set forth in its March 18, 2010 Notice of Proposed Rulemaking (NOPR) requiring the Electric Reliability Organization (ERO) to revise its definition of the term “bulk electric system.”<sup>4</sup> The Commission directs the ERO, through the ERO’s Reliability Standards Development Process, to revise the definition to address the Commission’s technical concerns, as discussed fully below, and ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The Commission believes that the best way to accomplish these goals is to eliminate the regional discretion in the current

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<sup>3</sup> 16 U.S.C. 824o.

<sup>4</sup> *Revision to Electric Reliability Organization Definition of Bulk Electric System*, Notice of Proposed Rulemaking, 75 FR 14097 (Mar. 24, 2010), FERC Stats. & Regs. ¶ 32,654 (2010).

definition, maintain a bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and establish an exemption process and criteria for excluding facilities that are not necessary for operating the interconnected transmission network. However, this Final Rule allows the ERO, in accordance with Order No. 693, to develop an alternative proposal for addressing the Commission's concerns with the present definition with the understanding that any such alternative must be as effective as, or more effective than,<sup>5</sup> the Commission's proposed approach in addressing the identified technical and other concerns, and may not result in a reduction in reliability.<sup>6</sup>

2. In Order No. 693, the Commission noted its concern that the current "bulk electric system" definition has the potential for gaps in coverage of facilities, and indicated that it would revisit the issue. This Final Rule is the next step towards addressing the Commission's concerns. The approved changes will help ensure reliability and

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<sup>5</sup> *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242, at P 31 (2007), *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

<sup>6</sup> *See, e.g., Version One Regional Reliability Standard for Resource and Demand Balancing*, 133 FERC ¶ 61,063, at P 14 (2010) (Noting the Commission's concern that approving a proposed Reliability Standard may result in reduced reliability). In addition, as a general matter, any proposed regional difference must be: (1) more stringent than the continent-wide definition, including a regional difference that addresses matters that the continent-wide Reliability Standard does not, or (2) necessitated by a physical difference in the Bulk-Power System. *See Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, at P 291 (2006), *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).



consistency in the bulk electric system classification throughout the interconnected United States. The Commission takes this action as a continuation of Order No. 693's efforts to ensure that the mandatory Reliability Standards fulfill the intent of Congress in enacting section 215 of the FPA to protect reliability of the nation's Bulk-Power System. The aim of the Final Rule is to eliminate inconsistencies across regions, eliminate the ambiguity created by the current discretion in NERC's definition of bulk electric system, provide a backstop review to ensure that any variations do not compromise reliability, and ensure that facilities that could significantly affect reliability are subject to mandatory rules. The Commission is not adding any new or modified text to its regulations.

## **I. Background**

### **A. Section 215 of the FPA**

3. On August 8, 2005, the Energy Policy Act of 2005 (EPAct 2005) was enacted into law. Title XII of EPAct 2005 added a new section 215 to the FPA,<sup>7</sup> which requires a Commission-certified ERO to develop mandatory and enforceable Reliability Standards, subject to Commission review and approval. Once approved, the Reliability Standards may be enforced by the ERO, subject to Commission oversight, or by the Commission independently.<sup>8</sup>

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<sup>7</sup> Pub. L. No. 109-58, Title XII, Subtitle A, 119 Stat. 594, 941 (2005) (codified at 16 U.S.C. 824o).

<sup>8</sup> See 16 U.S.C. 824o(e)(3).

4. In February 2006, the Commission issued Order No. 672<sup>9</sup> in which the Commission certified one organization, the North American Electric Reliability Corporation (NERC), as the ERO.<sup>10</sup>

**B. Order No. 693**

5. On March 16, 2007, in Order No. 693, pursuant to section 215(d) of the FPA,<sup>11</sup> the Commission approved 83 of 107 proposed Reliability Standards, six of the eight proposed regional differences, and the Glossary of Terms Used in Reliability Standards developed by NERC, the Commission-certified ERO. In addition, Order No. 693 addressed the applicability of mandatory Reliability Standards to the statutorily defined Bulk-Power System.

6. In Order No. 693, the Commission explained that section 215(a) of the FPA broadly defines the Bulk-Power System as:

facilities and control systems necessary for operating an interconnected electric energy transmission network (or any

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<sup>9</sup> Order No. 672, FERC Stats. & Regs. ¶ 31,204, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212.

<sup>10</sup> *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062, *order on reh'g and compliance*, 117 FERC ¶ 61,126 (2006) (certifying NERC as the ERO responsible for the development and enforcement of mandatory Reliability Standards), *aff'd sub nom. Alcoa Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009).

<sup>11</sup> *See* Order No. 693, FERC Stats. & Regs. ¶ 31,242 (directing improvements to 56 of the 83 approved Reliability Standards and leaving 24 Reliability Standards as pending until further information is provided), *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

portion thereof) [and] electric energy from generating facilities needed to maintain transmission system reliability.<sup>12</sup>

The Commission also approved NERC's definition of "bulk electric system," which is an integral part of the NERC Reliability Standards and is included in the NERC Glossary of Terms Used in Reliability Standards (NERC Glossary):

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.<sup>13</sup>

7. The Commission approved NERC's definition of "bulk electric system" with reservations. The Commission stated in Order No. 693 that, "at least for an initial period, the Commission will rely on the NERC definition of 'bulk electric system' 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."<sup>14</sup> In approving the use of NERC's definition of "bulk electric system," the Commission stated

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<sup>12</sup> Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 76.

<sup>13</sup> Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 75 n.47 (quoting NERC's definition of "bulk electric system").

<sup>14</sup> *Id.* P 75; *see also* Order No. 693-A, 120 FERC ¶ 61,053 at P 19 ("the Commission will continue to rely on NERC's definition of bulk electric system, with the appropriate regional differences, and the registration process until the Commission determines in future proceedings the extent of the Bulk-Power System").

that “[it] remains concerned about the need to address the potential for gaps in coverage of facilities.”<sup>15</sup>

**C. NERC’s June 14, 2007 Filing**

8. In a June 14, 2007 filing, NERC submitted the regional definitions of “bulk electric system.”<sup>16</sup> NERC represented that “[e]ach Regional Entity utilizes the definition of bulk electric system in the [NERC Glossary of Terms Used in Reliability Standards]; however, as permitted by that definition . . . several Regional Entities define specific characteristics or criteria that the Regional Entity uses to identify the bulk electric system facilities for its members.<sup>17</sup>] In addition, the Reliability Standards apply to load

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<sup>15</sup> Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 77 (footnotes omitted). For example, the Commission noted that some regional definitions of bulk electric system exclude facilities below 230 kV and transmission lines that serve Washington, DC and New York City and the Commission stated its intent to address this matter in a future proceeding. *Id.*

<sup>16</sup> NERC Informational Filing in Response to Paragraph 77 of Order No. 693, Docket No. RM06-16-000 (Jun. 14, 2007) (June 2007 Filing).

<sup>17</sup> *Id.* at 7. NERC also noted that the Texas Regional Entity, Florida Reliability Coordinating Council (FRCC), Midwest Reliability Organization, and SERC Reliability Corporation use the NERC definition of bulk electric system without modification. In a supplemental filing, NERC informed the Commission that Western Electricity Coordinating Council (WECC) uses the NERC definition alone in its implementation of Regional Entity activities. *See* NERC Supplemental Informational Compliance Filing, Docket No. RM06-16-000 (Mar. 6, 2009). Three other Regional Entities, ReliabilityFirst Corporation (ReliabilityFirst), Southwest Power Pool (SPP Regional Entity), and Northeast Power Coordinating Council, Inc. (NPCC), stated that they use the NERC definition supplemented with additional criteria. For example, SPP Regional Entity indicated that it uses the criteria specified in the NERC Statement of Registry Criteria (with one exception). ReliabilityFirst supplemented the NERC definition with specific voltage-based inclusions and exclusions. For example, ReliabilityFirst includes “lines operated at voltage of 100 kV or higher.” June 2007 Filing at 10. ReliabilityFirst

(continued...)

shedding and special protection relay facilities below 100 kV, which are monitored by Regional Entities, in compliance with NERC's Reliability Standards."<sup>18</sup>

9. As noted in the NOPR, NERC's June 2007 Filing indicated that NPCC uses the NERC definition of "bulk electric system" supplemented by additional criteria. Unlike the supplemental criteria of other Regional Entities, however, NPCC utilizes a significantly different approach to identifying bulk electric system elements. According to NERC, NPCC identifies elements of the bulk electric system using an impact-based methodology, as opposed to a voltage-based methodology. Further, as part of its approach to defining the "bulk electric system," NPCC includes its own definition of "bulk power system."<sup>19</sup>

10. According to NERC, NPCC analyzes all system elements within its footprint regardless of size (voltage) to determine their impact based on its "bulk electric system" definition. NPCC also utilizes a guidance document, which provides further information on the NPCC definition of "bulk power system" and how it is applied.<sup>20</sup>

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excludes certain radial facilities, balance of generating plant control and operation functions, and "all other facilities operated at voltages below 100 kV."

<sup>18</sup> June 2007 Filing at 7.

<sup>19</sup> "The interconnected electrical systems within northeastern North America comprised of system elements on which faults or disturbances can have a significant adverse impact outside of the local area." *Id.*, Attachment 1 (NPCC Document A-10, Classification of Bulk Power System Elements (Apr. 28, 2007)).

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

**D. NPCC's Identification of Bulk Electric System Facilities**

11. In a December 2008 Order, the Commission directed NERC and NPCC to submit to the Commission a comprehensive list of bulk electric system facilities located within the United States portion of the NPCC region.<sup>21</sup> The Commission explained that there appeared to be conflicting lists of bulk electric system elements developed by one of the balancing authorities in the United States portion of the NPCC region and it was not clear which, if any, of the lists were submitted to NPCC or approved by NPCC's Task Force on System Studies. In a compliance filing, NERC and NPCC indicated that the "NPCC Approved Bulk Electric System List" of June 2007 was the only listing of bulk electric system facilities approved by NPCC and is the current list of facilities within the U.S. portion of NPCC to which the NERC Reliability Standards apply.<sup>22</sup> The filing indicated that a majority of the 115 kV and 138 kV transmission facilities in the NYISO Balancing Authority Area of the NPCC region are excluded from the NPCC list of bulk electric system facilities, including those associated with nuclear power plants, and thus are

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<sup>21</sup> *North American Electric Reliability Corp.*, 125 FERC ¶ 61,295 (2008) (December 2008 Order).

<sup>22</sup> NERC and NPCC Compliance Filing at 5, Docket No. RC09-3-000 (Feb. 20, 2009). The February 20 Compliance Filing also indicated that the NPCC approved list of bulk electric system elements was not developed pursuant to NPCC's Document A-10, *Classification of Bulk Power System Elements*, identified in the June 2007 Filing. Rather, the approved NPCC list was developed pursuant to an earlier version of the NPCC impact-based methodology.

excluded from compliance with mandatory Reliability Standards.<sup>23</sup> The information provided by NPCC also indicated that numerous transmission lines at 100 kV or above that interconnect with registered generation facilities are excluded from NPCC's list of bulk electric system facilities.

12. In September 2009, NERC and NPCC submitted a compliance filing in which NPCC evaluated the impact and usefulness of a 100 kV "bright-line" "bulk electric system" definition as well as another optional method, which utilizes Transmission Distribution Factor calculations to determine reliability impacts. The NPCC definition would exclude radial network portions of the transmission system, as opposed to radial lines.<sup>24</sup> However, NPCC stated that it continues to believe that its current impact-based approach provides an adequate level of reliability and, therefore, intends to continue to apply the impact-based approach in classifying its bulk electric system elements.<sup>25</sup>

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<sup>23</sup> In addition, NPCC excludes approximately seven higher voltage (*e.g.*, 230 kV, 345 kV and 500 kV) transmission facilities, some connecting to nuclear power plants.

<sup>24</sup> NERC and NPCC Compliance Filing and Assessment of Bulk Electric System Report, Docket No. RC09-3-000 (Sep. 21, 2009). NPCC would define "radial portions of the transmission system to include (1) an area serving load that is connected to the rest of the network at a single transmission substation at a single transmission voltage by one or more transmission circuits; (2) tap lines and associated facilities which are required to serve local load only; (3) transmission lines that are operated open for normal operation; or (4) additionally as an option, those portions of the NPCC transmission system operated at 100 kV or higher not explicitly designated as a bulk electric system path for generation which have a one percent or less participation in area, regional or inter regional power transfers. *Id.* at 11.

<sup>25</sup> *Id.* at 7-8; *see also id.* at 14 ("If directed by the Commission to adopt the developed [bulk electric system] definition for U.S. Registered Entities within the NPCC

(continued...)

**E. Notice of Proposed Rulemaking**

13. On March 18, 2010, the Commission issued a NOPR proposing to direct NERC to revise the definition of “bulk electric system” in the NERC Glossary. The current “bulk electric system” definition provides Regional Entities discretion to define “bulk electric system,” including the ability to exclude facilities 100 kV or above, without ERO or Commission oversight. The Commission’s proposed revised definition would continue to include all facilities rated above 100 kV and eliminate regional variations, providing a consistent identification of bulk electric system facilities across the nation’s reliability regions. The proposal called for Commission and NERC approval for exempting facilities that would otherwise qualify as part of the bulk electric system on a facility-by-facility basis.

14. The NOPR identified inconsistencies between regions that resulted from the existing definition, such as NPCC not including two 115 kV transmission lines as part of the bulk electric system in its region even though the sections of these same lines that connect to PJM’s balancing authority area are considered bulk electric system elements within the ReliabilityFirst footprint. As an additional example, seven higher voltage (*e.g.*, 230 kV, 345 kV, and 500 kV) transmission facilities (some connecting to nuclear power plants) excluded from the list of bulk electric system facilities in NPCC would be included in other regions. Further, the NOPR provided several examples of disturbances

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footprint, NPCC would need additional time to carefully consider and develop a more extensive and detailed implementation plan.”).



that either began on or were propagated by 100-200 kV facilities including a February 26, 2008 event in FRCC originating at a 138 kV facility that resulted in the loss of 24 transmission lines and 4,300 MW of generation.

15. The Commission issued the NOPR on March 18, 2010, and required that comments be filed within 45 days after publication in the *Federal Register*.<sup>26</sup> More than eighty comments and reply comments to the NOPR proposal were submitted to the Commission.<sup>27</sup> Upon consideration of the comments, the Commission modifies certain proposals from the NOPR in this Final Rule, as described below.

## **II. Discussion**

### **A. Overview**

16. After consideration of the comments submitted, the Commission adopts the NOPR's proposal with some modifications. The Commission directs the ERO to revise the definition of "bulk electric system" through the NERC Standards Development Process to address the Commission's concerns discussed herein. The Commission believes the best way to address these concerns is to eliminate the Regional Entities' discretion to define "bulk electric system" without ERO or Commission review, maintain a bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and adopt an exemption process and criteria for excluding facilities that are not necessary to operate an interconnected electric transmission

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<sup>26</sup> See 75 FR 14097 (Mar. 24, 2010).

<sup>27</sup> A list of commenters appears in Appendix A.

network. However, NERC may propose a different solution that is as effective as, or superior to, the Commission's proposed approach in addressing the Commission's technical and other concerns so as to ensure that all necessary facilities are included within the scope of the definition.

**1. Definition of Bulk Electric System**

**(a) Commission Authority**

17. In the NOPR, the Commission proposed, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, to require NERC to submit a revised NERC definition of "bulk electric system" that provides a 100 kV threshold for facilities that are included in the bulk electric system and eliminates the currently-allowed discretion of a Regional Entity to define "bulk electric system" within its system without NERC or Commission oversight.

**(1) Comments**

18. Several commenters argue that the Commission's proposal exceeds its statutory authority.<sup>28</sup> Other commenters contend that the Commission's proposal is inconsistent with the statutory regime envisioned in section 215 of the FPA, requiring the

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<sup>28</sup> See, e.g., APPA/NRECA, NYPSC, NYSRC, EEI, Joint Western Commenters, NERC, Snohomish, Tacoma Power, and PGE. Note that although the parties we have identified as the "Joint Western Commenters" submitted separate comments, the comments were virtually identical. Consequently, we cite their comments as a single group.

Commission to defer to the ERO on technical issues and for the ERO to have primary responsibility for developing specific Reliability Standards.

(i) **NERC Standards Development Process and Deference to NERC and the Regional Entities**

19. NERC supports the Commission's objectives of ensuring a common understanding and consistent application of "bulk electric system" across the regions, while allowing variations to the definition based on reliability. However, NERC objects to the Commission making unilateral decisions with respect to the definition, as it did in the NOPR, rather than allowing this issue to be addressed through the NERC Reliability Standards Development Process.<sup>29</sup> NERC states that the NERC Glossary of Terms is part-and-parcel of the Reliability Standards and therefore fall under the same section 215 process. NERC argues that the Commission may order the ERO, pursuant to section 215(d)(5) of the FPA, to submit a proposed Reliability Standard or modification to a Reliability Standard to the Commission. Following this submission, NERC continues, the Commission may then approve the proposal or remand it to the NERC Reliability Standards Development Process for further consideration.

20. NERC states that by directing this change, the Commission is bypassing the NERC Reliability Standards Development Process, and the Commission will not have the opportunity to consider NERC's guidance in developing an equally effective and perhaps superior alternative. NERC states that the approach in the Commission's NOPR would

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<sup>29</sup> NERC at 8-11.

accomplish indirectly that which it is prohibited from doing directly, in contravention of well-established judicial precedent. NERC notes that the Commission refrained from taking similar unilateral action in Order No. 693. NERC requests the Commission clarify in the Final Rule that any modification to the definition of bulk electric system be accomplished through the NERC Reliability Standards Development Process.

21. Similarly, EEI, Duke Energy, APPA/NRECA, and other commenters assert that the Commission should defer to the NERC Reliability Standards Development Process, and allege that the proposal unreasonably departs from the Commission's precedent in Order No. 693.

22. Snohomish also asserts that the proposed rule fails to defer to the technical expertise of the regional reliability organizations and inappropriately interferes in the local work of Snohomish's Board regarding decisions on levels of service.

23. TAPS states that Congress did not intend for the Commission to undertake a facility-by-facility review of all facilities above 100 kV, and that the proposed rule is contrary to section 215's apportionment of primary responsibility for reliability administration to the ERO.<sup>30</sup> Additionally, TAPS states that the Commission's proposed facility-by-facility review would not satisfy section 215's goal of effective and efficient reliability administration.

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<sup>30</sup> TAPS at 4; *see also* Snohomish at 22-28.

(ii) **Bulk-Power System**

24. NYSRC argues that section 215 does not provide a “bright-line” test for Bulk-Power System facilities and states that the statutory intent of section 215 limits the Commission’s jurisdiction to facilities that are necessary for the reliable operation of the Bulk-Power System.<sup>31</sup> Several commenters state that the Commission’s proposal exceeds its statutory authority as described in the definition of “Bulk-Power System” because the proposed definition of bulk electric system would likely encompass facilities not necessary for operating the interconnected network,<sup>32</sup> and that the statutory definitions of “Reliability Standard” and “Reliable Operation” refer to protecting the system from instability, uncontrolled separation, or cascading failures, not local-area outages.<sup>33</sup> The commenters contend that a functional test, such as NPCC’s current material impact assessment would be more appropriate since it is tailored to include facilities that are necessary for operation of an interconnected electric energy transmission network.

25. GTC/GSOC add that the proposed change would make the definition of “bulk electric system” broader than the statutory definition of “Bulk-Power System,” and therefore would exceed the Commission’s authority.

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<sup>31</sup> NYSRC at 7-8.

<sup>32</sup> *See, e.g.*, NYPSC, NYSRC, Duke Energy, Indicated New York Transmission Owners, Snohomish and Joint Western Commenters.

<sup>33</sup> NYSRC at 7.

(iii) **Distribution Facilities**

26. Several other parties assert that the proposed rule will inappropriately include distribution facilities as part of the bulk electric system, and argue that the Commission's proposal is contrary to Congress's definition of "Bulk-Power System" and the Commission's own precedent regarding transmission versus local distribution.<sup>34</sup> Several parties state that FPA section 215 specifically excludes distribution facilities and that they therefore should be excluded from the definition of "bulk electric system."

Constellation/CENG argues that the Commission's proposal to exclude from the definition of "bulk electric system" "[r]adial transmission facilities serving only load with one transmission source" is too limiting. Constellation/CENG believes that this approach will include local distribution facilities in a manner contrary to section 215 of the FPA.

27. The NYPSC contends that the Commission's proposal exceeds its jurisdiction by encompassing local distribution facilities that are not necessary for operating the interconnected transmission network. It states that 138 kV facilities in New York City operate above 100 kV but do not serve a bulk system function due to the high concentration of load served by these lines. It asserts that transmission facilities such as these that move power between Bulk-Power System and distribution facilities do not affect the reliable operation of the bulk system. The New York Transmission Owners

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<sup>34</sup> See, e.g., Constellation/CENG, Dow, Duke Energy, GTC/GSOC, Hydro-Québec, Indicated New York Transmission Owners, Joint Western Commenters, NARUC, NV Energy, NYSRC, PGE, Public Power Council, Snohomish Tacoma Power, TIEC.

contend that the Long Island Power Authority's (LIPA) system east of the Northport system is composed of 138 kV lines with limited connections to other areas that is not affected by other regional flows, but instead mirrors a radial system feeding local load.

28. Snohomish, Consumers Energy, PGE, Tacoma Power and other commenters argue that the Commission's proposal, unless clarified to exclude distribution facilities, is contrary to statute because section 215 directs that distribution facilities should be excluded on a functional basis regardless of voltage.<sup>35</sup> Snohomish argues that the Commission's proposal departs from its previous determinations in Order No. 693 regarding the difference between transmission and distribution systems.<sup>36</sup> Further, it states that section 215 emphasizes how facilities are used rather than their voltage level, and asserts that the NOPR's definition runs counter to the statutory definition.

## (2) Commission Determination

### (i) Overview

29. We disagree that the Commission exceeded its statutory authority by directing the ERO to revise the definition of bulk electric system in its Glossary of Terms. We agree with NERC that the NERC Glossary is part of the Reliability Standards and therefore falls under the same section 215 process. Pursuant to section 215(d)(5), the Commission may order the ERO to submit a proposed Reliability Standard or a modification to a

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<sup>35</sup> See, e.g., Snohomish at 20-22; PGE at 3-6; Tacoma Power at 2-3.

<sup>36</sup> Snohomish at 20-21 (citing Order No. 693, FERC Stats. and Regs. ¶ 31,242 at P 23 n.20).

Reliability Standard that addresses a specific matter. Here, by directing a revision to the definition of bulk electric system, the Commission orders a modification to a definition of a term contained in a number of Commission-approved Reliability Standards.<sup>37</sup> Because this term is contained within Commission-approved Reliability Standards, the Commission has the authority to direct the ERO to develop a modification of the definition of a defined term contained in the Reliability Standards under the process delineated in section 215 of the FPA.

30. For the reasons discussed more fully below, the Commission finds that the current definition of bulk electric system is insufficient to ensure that all facilities necessary for operating an interconnected electric energy transmission network are included under the “bulk electric system” rubric. Therefore, pursuant to section 215(d)(5) of the FPA,<sup>38</sup> the Commission directs the ERO to modify, through the Standards Development Process, the definition of “bulk electric system” to address the Commission’s technical and policy concerns described more fully herein. The Commission believes the best way to address these concerns is to eliminate the regional discretion in the ERO’s current definition, maintain the bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and establish an exemption process and criteria for

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<sup>37</sup> See, e.g., CIP-002-2, COM-001-1.1, EOP-004-1, EOP-005-1, FAC-008-1, FAC-009-1, FAC-010-2, FAC-011-2, FAC-013-1, FAC-014-2, IRO-001-1.1, IRO-002-1, IRO-003-2, IRO-004-1, IRO-005-2, IRO-006-4.1, NUC-001-2, PER-001-0.1, PER-002-0, PER-003-0, PRC-004-1, PRC-005-1, PRC-021-1, PRC-022-1, PRC-023-1, TOP-001-1, TOP-002-2, TOP-008-1, TPL-002-0, TPL-003-0, TPL-004-0.

<sup>38</sup> 16 U.S.C. 824o(d)(5).



excluding facilities the ERO determines are not necessary for operating the interconnected transmission network. It is important to note that Commission is not proposing to change the threshold value already contained in the definition, but rather seeks to eliminate the ambiguity created by the current characterization of that threshold as a general guideline.<sup>39</sup>

31. In accordance with Order No. 693, the ERO may develop an alternative proposal for addressing the Commission's concerns with the present definition with the understanding that any such alternative must be as effective as, or more effective than, the Commission's proposed approach in addressing the identified technical and other concerns,<sup>40</sup> and may not result in a reduction in reliability.<sup>41</sup> If the ERO decides to propose an alternative approach, it must explain in detail, and with a technical record sufficient enough for the Commission to make an informed decision, how its alternative addresses each of the Commission's concerns in a manner that is as effective as, or more effective than, the Commission's identified solution.<sup>42</sup> Additionally, the ERO would need to address the factors the Commission will consider in determining whether a proposed

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<sup>39</sup> We note that all regions except NPCC currently utilize 100 kV as a general threshold.

<sup>40</sup> Order No. 693, FERC Stats. & Regs. 31,242 at P 31.

<sup>41</sup> See, e.g., *Version One Regional Reliability Standard for Resource and Demand Balancing*, 133 FERC ¶ 61,063, at P 14 (2010); *North American Electric Reliability Corporation Reliability Standards Development and NERC and Regional Entity Enforcement*, 132 FERC ¶ 61,217, at P 112 (2010).

<sup>42</sup> Order No. 693 FERC Stats. & Regs. 31,242 at P 31.

Reliability Standard is just and reasonable, as outlined in Order No. 672. In particular, Order No. 672 states that proposed Reliability Standards “should be clear and unambiguous regarding what is required and who is required to comply.”<sup>43</sup> Another factor indicates that a “proposed Reliability Standard should be designed to apply throughout the interconnected North American Bulk-Power System, to the maximum extent this is achievable with a single Reliability Standard.”<sup>44</sup> As Order No. 672 further requires, any proposed regional difference must be: (1) more stringent than the continent-wide definition, including a regional difference that addresses matters that the continent-wide definition does not; or (2) necessitated by a physical difference in the Bulk-Power System.<sup>45</sup>

32. The Commission further finds that revising the definition to address the identified concerns is a significant step toward improving the reliability of the Bulk-Power System in North America because it protects the reliability of the bulk electric system and provides clarity and consistency across the nation’s reliability regions in identifying bulk electric system facilities.

33. The Commission directs the ERO to submit these modifications no later than one year from the effective date of this Final Rule. We will address each proposal and the specific comments received on each proposal in the remainder of this Final Rule.

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<sup>43</sup> See Order No. 672, FERC Stats. & Regs. 31,204 at P 325.

<sup>44</sup> See *id.* P 331.

<sup>45</sup> *Id.* P 291.

(ii) **NERC Standards Development Process and Deference to NERC and the Regional Entities**

34. With regard to the concerns raised by some commenters about the prescriptive nature of the Commission's proposed modifications, we agree that, consistent with Order No. 693, a direction for modification should not be so overly prescriptive as to preclude the consideration of viable alternatives that may produce an equally effective or efficient solution. However, some guidance is necessary, as the Commission explained in Order No. 693:

[I]n identifying a specific matter to be addressed in a modification . . . 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.<sup>46</sup>

35. Thus, due to the importance of the bulk electric system definition to our overall ability to carry out the mandates of section 215, and the problems we have identified with the current definition, we provide specific details regarding the Commission's expectations. We intend by doing so to provide useful direction to assist in the Reliability Standards Development Process, not to impede it. As we explained in Order No. 693, we find that this is consistent with statutory language that authorizes the Commission to direct the ERO to submit a modification "that addresses a specific matter"

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<sup>46</sup> Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 185.

if the Commission considers it appropriate to carry out section 215 of the FPA.<sup>47</sup>

Although some commenters' contend that we should "defer to regional expertise," we note that the statute specifies that we should "give due weight" to the ERO's technical expertise.<sup>48</sup> The Commission's action here does not conflict with that statutory requirement. In this Final Rule, we have considered commenters' concerns and, although we have identified a proposed approach, the Commission provides flexibility by directing the ERO to address the underlying issue through the Reliability Standards Development Process.<sup>49</sup> Consequently, consistent with Order No. 693, we clarify that where the Final Rule identifies a concern and offers a specific approach to address that concern, we will consider an equivalent alternative approach provided that the ERO demonstrates that the alternative will adequately address the Commission's underlying concern or goal as efficiently and effectively as the Commission's proposal.<sup>50</sup>

**(iii) Bulk-Power System**

36. With regard to the alleged conflict between "bulk electric system" and "Bulk-Power System," the Commission noted in Order No. 693 that Congress chose to create a new term, "Bulk-Power System," with a definition that is distinct from the term of art

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<sup>47</sup> *Id.* P 186 (citing 16 U.S.C. 824o(d)(5)).

<sup>48</sup> 16 U.S.C. 824o(d)(2); *see also* Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 345 ("We do not agree that giving due weight means a rebuttable presumption that the Reliability Standard meets the statutory requirement of being just, reasonable, not unduly discriminatory or preferential, and in the public interest.").

<sup>49</sup> Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 186.

<sup>50</sup> *Id.*

(“bulk electric system”) used by industry, and thus there is an intentional distinction between the Bulk-Power System and the bulk electric system.<sup>51</sup> The Commission further noted that the statutory term “Bulk-Power System” has not been definitively defined but does not establish a voltage threshold limit of applicability or configuration as does the NERC definition of “bulk electric system,” and therefore may reach more facilities than NERC’s definition of “bulk electric system.”<sup>52</sup>

(iv) **Distribution Facilities**

37. The Commission has stated that the statutory term “Bulk-Power System” defines the jurisdiction of the Commission.<sup>53</sup> The Commission noted that it has not defined the extent of the facilities covered by the Bulk-Power System, but that Congress specifically exempted “facilities used in the local distribution of electric energy” from the definition. FPA section 215 defines the term “Bulk-Power System” as encompassing the “facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof).”<sup>54</sup> In ascertaining the extent of the facilities included in the “Bulk-Power System” definition, the Commission’s prior discussion regarding the inclusion of generation facilities as part of the Bulk-Power System is instructive. In the discussion, the Commission stated that, “if electric energy

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<sup>51</sup> *Id.* P 76.

<sup>52</sup> *See id.* P 76; Order No. 693-A, 120 FERC ¶ 61,053 at P 17-18.

<sup>53</sup> Order No. 693-A, 120 FERC ¶ 61,053 at P 19.

<sup>54</sup> 16 U.S.C. 824o(a)(1).

from a generating facility is needed to maintain a reliable transmission system, that facility is part of the Bulk-Power System with respect to the energy it generates that is needed to maintain reliability.”<sup>55</sup> Similarly, several 115 and 138 kV facilities that some entities term as “distribution” may be needed to reliably operate the interconnected transmission system. Determining where the line between “transmission” and “local distribution” lies, which includes an inquiry into which lower voltage “transmission” facilities are necessary to operate the interconnected transmission system, should be part of the exemption process the ERO develops.

38. The Commission disagrees with comments that appear to assert that the Commission’s jurisdiction extends only to facilities that could, if improperly operated, singularly cause cascading outages, uncontrolled separation or instability. By this narrow metric, the facilities that caused the 2003 Blackout would not be viewed as critical since not one of the individual facilities caused the outage. In defining jurisdictional facilities, section 215(a)(1) focuses on whether facilities are necessary to operate the interconnected transmission system, not solely on the consequences of unreliable operation of those facilities. Lower voltage facilities needed to reliably operate the grid tend to operate in parallel with other high voltage and extra high voltage facilities, interconnect significant amounts of generation sources and may operate as part of a defined flow gate. These parallel facilities operated at 100-200 kV will experience similar loading as higher

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<sup>55</sup> Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 71.

voltage facilities at any given time. Additionally, the lower voltage facilities will be relied upon during contingency scenarios.

39. For example, we are not persuaded by the NYPSC's argument that the 138 kV system in New York, and specifically the 138 kV system including those facilities in the Astoria area, are all distribution facilities. We do not believe that most of these facilities are local distribution because: the facilities are not primarily radial in character, as they are connected to the 345 kV network in the Astoria area at over six different points; the 138 kV system is networked amongst itself; power flows both in and out of the system into both NYISO and PJM facilities depending on time of day and loading; and the system is not constrained to a comparatively restricted geographical area due to multiple interconnections. The 138 kV system in the Astoria area includes six major substations that are interconnected at 345 kV to both NYISO and PJM facilities that are integral parts of the Eastern Interconnection. There are ten 138 kV phase angle regulators connecting the 345 kV stations to the 138 kV network, which are necessary to control the appropriate distribution of power flows between the 345 kV and 138 kV systems to accommodate power transfers from upstate New York and PJM into southeastern New York. In addition, there are approximately 9,000 MW of capacity resources directly connected to the 138 kV network in the New York City area at different points, 2,000 MW of which is connected in the Astoria area. Similarly over 10,000 MW of customer firm demand in the area is supplied from the 138 kV to lower voltage levels via step-down transformers. None of these characteristics is consistent with any reasonable definition of local

distribution.<sup>56</sup> To the extent that any individual line would be considered to be local distribution, that line would not be considered part of the bulk electric system.

40. Nor are we persuaded by the Indicated New York Transmission Owners' statement that LIPA's service territory -- which includes a majority of Long Island, identified as Zone K by NYISO and, as reported in the NYISO "Load & Capacity Data," had a 2010 summer peak load of 5,300 MW -- "mirrors a radial system feeding local load." As with the 138 kV network in New York City discussed above, the LIPA system contains significant capacity resources (5,700 MW), is interconnected with other portions of NYISO, ISO-NE, and PJM, and its operations affect and depend on operations in other portions of New York, as well as New Jersey and Connecticut.<sup>57</sup>

41. Some commenters allege that the proposal is an unexpected departure from the Commission's previous actions regarding the bulk electric system in Order No. 693. To the contrary, the Commission was very clear about its reservations in accepting the NERC bulk electric system definition in Order No. 693 and expressly accepted the

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<sup>56</sup> This example illustrates one of the deficiencies of the NPCC impact-based approach for identifying bulk electric system facilities, discussed more fully below.

<sup>57</sup> See [http://www.nyiso.com/public/webdocs/services/planning/reliability\\_assessments/AppxE.pdf](http://www.nyiso.com/public/webdocs/services/planning/reliability_assessments/AppxE.pdf) and [http://www.nyiso.com/public/webdocs/services/planning/planning\\_data\\_reference\\_documents/2010\\_GoldBook\\_Public\\_Final\\_033110.pdf](http://www.nyiso.com/public/webdocs/services/planning/planning_data_reference_documents/2010_GoldBook_Public_Final_033110.pdf).



definition for an “initial period”<sup>58</sup> subject to subsequent review.<sup>59</sup> The Commission’s action here will ensure that all facilities necessary to maintain a reliable transmission system are included as part of the bulk electric system and thus will be subject to ERO and Commission oversight.<sup>60</sup>

(b) **Scope of the Definitional Change of “Bulk Electric System”**

(1) **NOPR Proposal**

42. In the NOPR, the Commission proposed to direct the ERO to revise its definition of the term “bulk electric system” to include all electric transmission facilities with a rating of 100 kV or above.<sup>61</sup> The Commission’s proposal further states that a Regional

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<sup>58</sup> Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 75.

<sup>59</sup> In accepting NERC’s definition of “bulk electric system,” the Commission explained: “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. The Commission intends to address this matter in a future proceeding.”

*Id.* P 77 (footnotes omitted).

<sup>60</sup> While the Commission seeks to ensure that the definition of “bulk electric system” includes all facilities 100 kV or above that are necessary for reliable operation, our action here is not intended to determine the extent of the facilities included in the Bulk-Power System. As stated in Order No. 693-A, the Commission believes that the Bulk-Power System reaches farther than those facilities that are included in NERC’s definition of the bulk electric system, but we have not definitively defined the extent of the facilities covered by the Bulk-Power System, and we are not doing so here. *See* Order No. 693-A at P 17-18.

<sup>61</sup> NOPR, FERC Stats. & Regs. ¶ 32,654 at P 1.

Entity must seek ERO and Commission approval before exempting any facility rated at 100 kV or above from compliance with mandatory Reliability Standards.

(2) **Comments**

43. NERC argues that the proposed definitional change would have a much broader impact than acknowledged by the Commission. Among other things, NERC states that the proposed change to “rated at” from the current “operated at” will dramatically expand the scope of facilities and entities affected by the change. NERC states that the proposal will unnecessarily include some facilities that entities built at higher voltage levels (i.e. 138 kV) to accommodate future load growth while presently operating the facilities at lower voltages (i.e., 69 kV).

44. Several commenters seek clarification that the definition of “bulk electric system” is not intended to supersede voltage thresholds specified in specific Reliability Standards.<sup>62</sup> For example, Reliability Standard FAC-003 generally applies to transmission lines 200 kV and above.

45. Joint Western Commenters and Bay Area Municipal argue that the definition of “bulk electric system” that the Commission ultimately accepts should clarify that if an element is determined to be part of the bulk electric system, such an element is not necessarily a transmission asset.

46. Joint Western Commenters state that an entity should be able to de-register as a Distribution Provider and Load-Serving Entity if it does not own any bulk electric system

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<sup>62</sup> See, e.g., EEI, Dominion Power, National Grid, and Southern Company.

elements.<sup>63</sup> They state that an entity with no elements in the bulk electric system cannot be considered an owner or operator of the bulk electric system, and because operation of that entity's distribution assets has no material impact on the bulk electric system, it should be exempt from regulation as transmission and the need to register and participate in the regulatory framework for transmission facilities. These commenters also state that requiring an entity with no bulk electric system elements to comply with the mandatory Reliability Standards would be an unnecessary burden on the entity, and a diversion of resources by the Regional Entity, NERC, and the Commission.<sup>64</sup>

47. Although EEI supports the Commission's proposal not to change the ERO treatment of radials under the ERO definition of bulk electric system, several commenters raise concerns about the scope of the exemption going forward.

48. Several commenters believe that the statement in the NOPR that radial lines would not be part of the bulk electric system is not enough to remove ambiguity.<sup>65</sup>

APPA/NRECA notes that the NOPR leaves a question open as to whether radial lines would be automatically exempt under the bulk electric system definition or whether entities would have to go through the multi-tiered exemption process.<sup>66</sup> Other commenters point out that certain Regional Entities currently provide a clearer and more

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<sup>63</sup> Joint Western Commenters at section IV.B.

<sup>64</sup> *Id.*

<sup>65</sup> *See, e.g., id.* at section III.C.

<sup>66</sup> APPA/NRECA at 19-23.

valid approach to determining whether facilities should be classified as exempt radial facilities. They state for example that the WECC process includes additional detail regarding demarcation points and system characteristics that are important in defining “radial.” Commenters also state that the WECC transmission system includes radial lines, where a backup feed is possible, but is normally open, and a utility should not be penalized for having a secondary feed via a normally open line by requiring it to automatically become part of the bulk electric system. The bright line 100 kV threshold would encourage small utilities to choose not to provide backup service options, reducing overall customer service.

49. Arguing that NERC’s current definition of radial transmission facilities, defined as “facilities serving only load with one transmission source,” is too narrow, National Grid supports adoption of a broader definition that includes tap lines and associated facilities used to serve local load only, and transmission lines that are operated in an open position for normal operations.<sup>67</sup>

50. ELCON states that the Final Rule should specify that radial lines do not have to go through the exemption process.

51. FRCC states the Commission should afford the Regional Entities sufficient time to complete their efforts to define the scope of the bulk electric system, since they are in the

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<sup>67</sup> National Grid at 10.

process of establishing criteria for the exclusion of facilities as “radial transmission facilities.”

**(3) Commission Determination**

52. We grant the clarification sought by commenters that the 100 kV threshold will not modify thresholds established in individual Reliability Standards such as FAC-003.

53. In response to comments, although the NOPR used the term “rated at,” the Commission did not intend to require NERC to utilize that term rather than the term “operated at” which is reflected in the current definition of bulk electric system. While the Commission does not have firm data on the number of facilities that operate at a voltage significantly lower than the rated voltage, we find that the term “rated at” could generate confusion.<sup>68</sup>

54. We believe that the issues of whether a distribution provider or load-serving entity may de-register if it is shown not to own any bulk electric system elements, and whether the inclusion of a facility as part of the bulk electric system is or is not determinative of that facility’s status as a transmission asset, are addressed by the NERC Registry Criteria and beyond the scope of this proceeding.

55. As we stated in the NOPR, we do not seek to modify the second part of the definition through this Final Rule, which states that “[r]adial transmission facilities

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<sup>68</sup> Operating voltage usually encompasses a small range of voltages around the expected or normal operating value while rated voltage depends on the design of the facilities.

serving only load with one transmission source are generally not included in this definition.” While commenters would like to expand the scope of the term “radial” to exclude certain transmission facilities such as tap lines and secondary feeds via a normally open line, we are not persuaded that such categorical exemption is warranted. For example, when the normally “open” line is “closed,” it becomes part of the transmission network and therefore should be subject to mandatory Reliability Standards. Commenters also argued that the bright line 100 kV threshold would encourage small utilities to choose not to provide backup service options, reducing overall customer service. We acknowledge these concerns, and direct the ERO to consider these comments regarding radial facilities in crafting an exemption methodology.

(c) **Technical and Historical Justification for Modification**

(1) **NOPR Proposal**

56. In the NOPR, the Commission stated its concern that if it does not clarify the “bulk electric system” definition to apply a stricter 100 kV threshold, it would not be fulfilling Congress’s intent in enacting section 215. The NOPR stated that the Commission believes there is an adequate technical and reliability-related justification, discussed further below, for the proposed 100 kV operating threshold for identifying bulk electric system facilities. Additionally, the NOPR noted that NERC already applies a

general 100 kV threshold.<sup>69</sup> Further, at present all regions, with the exception of NPCC, also apply a 100 kV threshold.

57. The NOPR identified inconsistencies between regions, such as two transmission lines that are classified as bulk electric system in ReliabilityFirst but not in NPCC.<sup>70</sup>

The NOPR also offered examples of disturbances that either began on or were propagated by 100-200 kV facilities, including a February 26, 2008 event in FRCC originating at a 138 kV facility that resulted in the loss of 24 transmission lines and 4,300 MW of generation, and a June 27, 2007 event on 138 kV transmission lines in the NPCC region that included sequential tripping of four 138 kV cable-circuits without a contingency.

The June 27, 2007 NPCC event (the “Astoria West event”) resulted in the interruption of service to about 137,000 customers as well as the loss of five generators and six 138 kV transmission lines. Further, the NOPR pointed to Transmission Loading Relief (TLR) issuances on non-bulk electric system elements in New York and the historical basis for a 100 kV threshold as justification.

## (2) Comments

58. Several commenters including ISO-NE, BGE, Northeast Utilities, ReliabilityFirst, Manitoba Hydro, and Dominion Power support the proposed change, arguing that the increased consistency and applicability of NERC Reliability Standards will ensure

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<sup>69</sup> NOPR, FERC Stats. & Regs. ¶ 32,654 at P 13-14.

<sup>70</sup> See NERC/NPCC, compliance filing, Docket No. RC09-3 (filed Feb. 20, 2009).

reliability. Moreover, a number of other commenters who ultimately suggest that other processes are more appropriate for undertaking a modification to the definition of “bulk electric system” agree with the overriding goal to develop a more consistent definition of “bulk electric system.” For example, NERC notes that it “supports the Commission’s objectives of ensuring a common understanding and consistent application of the definition of “bulk electric system” across the regions,” with variations justified on the basis of reliability.<sup>71</sup> Likewise, ReliabilityFirst supports the creation of a bright-line rule for determining which facilities are subject to Reliability Standards (with appropriate process for refinement or exemption), and both SCE and WECC generally support a rebuttable presumption that transmission facilities above 100 kV should be initially classified as “bulk electric system” facilities, as long as appropriate mechanisms for exclusion are in place.<sup>72</sup>

59. Several other commenters contend that the proposal does not explain how the proposed changes to bulk electric system classification would have prevented the discussed events or improved reliability.<sup>73</sup> They argue that the NOPR did not describe whether these events took place on facilities classified as “bulk electric system” or non-“bulk electric system.” Similarly, commenters contend that the NOPR does not show the

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<sup>71</sup> NERC at 2.

<sup>72</sup> ReliabilityFirst at 2; SCE at 2; WECC at 3.

<sup>73</sup> See, e.g., FRCC, NARUC, NYSRC, Redding, GTC/GSOC.



connection between regional inconsistencies and reliability concerns.<sup>74</sup> Commenters also assert the proposal will be expensive and lengthy to implement without improving reliability.

60. Additionally, several commenters state that a material impact assessment should be used instead of a “bright-line” test, thus deferring to the Regional Entities’ technical expertise.<sup>75</sup> Commenters also contend that the Commission has not shown how the current NPCC method is flawed or how it has harmed reliability. They conclude that a material impact assessment is preferable to a “bright-line” test because they believe it will focus limited resources towards critical facilities that have the largest impact.

61. APPA/NRECA, NARUC, CMUA, CPUC, and TANC state that the specific examples cited by the Commission of outages on lower voltage lines in one region do not support making sweeping changes to the definition of bulk electric system as proposed in the NOPR. APPA/NRECA notes that the Commission’s stated concerns about facilities inappropriately excluded from the bulk electric system definition are limited to the NPCC region, while the Commission’s proposed solution is directed at and would affect all regions.<sup>76</sup> APPA/NRECA asserts that the Commission’s limited examples of outages on lines excluded from the bulk electric system definition in NPCC cannot support imposing the Reliability Standards on all lower-voltage facilities, regardless of the function and

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<sup>74</sup> See, e.g., NARUC, NYPSC, FRCC, Dow, GTC/GSOC, Hydro-Québec, Ontario Power, NV Energy, Snohomish, Southern.

<sup>75</sup> See, e.g., NARUC, NYSRC.

<sup>76</sup> APPA/NRECA at 15-16.

impact of such facilities.<sup>77</sup> Finally, APPA/NRECA notes that the Commission's attempt to justify the proposal based on the total amount of 100 kV facilities in service is inapposite, as it has no bearing on whether or not those facilities function as part of the bulk electric system.<sup>78</sup> Similarly, CMUA asserts that it is inappropriate to draw conclusions regarding the effect of disturbances on lower-voltage facilities based on a limited number of cases in one region, without consideration of the nature of the facilities and particular features of that region.<sup>79</sup> NARUC also contends that a key part of the historical approach to the "bulk electric system" definition was the Regional Entities' ability to define the bulk electric system for its own region. Further, NARUC states that the NOPR does not identify any excluded lines critical to reliability. Additionally, NARUC believes NPCC's estimated \$280 million cost to comply with the new ruling will outweigh the expected minimal to negligible benefit.

62. The Joint Canadian Parties assert that the impact-based methodology ensures that all facilities critical to wide-area reliability, independent of voltage level, are covered by the bulk electric system definition. Similarly, they argue that the NERC Reliability Standards should apply only to facilities that, if lost, would have the potential for a wide-area reliability impact.

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<sup>77</sup> *Id.* at 30-31.

<sup>78</sup> *Id.* at 32.

<sup>79</sup> CMUA at 5.

63. The Indicated New York Transmission Owners and NYSRC state that the NOPR does not sufficiently account for the time and cost required to implement the proposed rule change. Further, they contend that the TLR events cited in the NOPR were issued in order to mitigate an unanticipated clockwise flow around Lake Erie, and that classification of lower voltage facilities as part of the “bulk electric system” would not have affected the need for the TLR. The NYPSC and Duke Energy contend that the 115 kV facility in the Central East ties flowgate constitutes a minor element of the flowgate that would not result in a cascading event on the bulk system.

64. NYSRC also contends that the February 26, 2008 and the June 13, 2008 events cited in the NOPR occurred in regions that already use a 100 kV threshold and therefore do not show that the 100 kV threshold is more effective at protecting reliability than the impact-based approach. Additionally, NYSRC believes that the current methodology appropriately defers to regional expertise.

65. NYPSC also states that the June 27, 2007 event “was caused by lighting [sic] strikes on the telecommunications system over which several relay signals were carried,” and that the utility involved has since ensured separate paths are provided for telecommunications beyond the fence of the electric utility’s facilities.<sup>80</sup> Additionally, the NPCC Working Group concluded that the event was confined to the Astoria West load pocket and that no other portions of the Consolidated Edison (ConEd) system were

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<sup>80</sup> NYSRC at 10.

affected. Separately, the NYPSC states that the Commission has not provided evidence as to how the regional inconsistencies identified in the NOPR jeopardize reliability.

66. Alcoa states that it supports NPCC's current material impact assessment because it believes most of the facilities not included in the bulk electric system are accurately excluded. Alcoa further contends that the Commission has not shown how inclusion of lines like these will improve reliability and that the reliability benefit is only presumed. Dow likewise argues that it does not believe that the applicability of NERC Reliability Standards is a sufficient basis to assume that reliability will improve and argues that the NOPR does not provide any additional evidence.

67. Constellation/CNEG supports continued use of Regional Reliability Organizations' technical discretion as opposed to the Commission's proposal. Constellation/CNEG states that current proposals from WECC utilizing a Short Circuit Megavolt Ampere methodology, or a three-phase fault with delayed clearing analysis, demonstrate the proper regional discretion and technical expertise. Similarly, Tacoma Power requests that the WECC Bulk Electric System Definition Task Force (BESDTF) be allowed to complete its work, and states that the Commission has not provided sufficient technical support for requiring a bright-line voltage-based standard.<sup>81</sup> The Joint Western Commenters state that the Final Rule should be consistent with the WECC BESDTF's efforts that will utilize an impact based approach. Further, if the Commission

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<sup>81</sup> Tacoma Power at 6.

has issues with the NPCC method, Constellation/CNEG state that the Commission should address its concerns with NPCC specifically rather than through an across the board proposal. The Joint Western Commenters similarly state that the Western entities should not be penalized for NPCC's actions, which actions are the apparent impetus for issuance of the NOPR.

68. Hydro-Québec and Ontario Power state that application of the NERC Reliability Standards should be limited to facilities with a material impact on reliability, based on regional variances and expertise. The proposed change would divert needed resources from more important facilities.

69. NESCOE requests the Commission study the impact of the proposal more before implementing the rule.

70. Bay Area Municipal agrees that 115 kV and 138 kV facilities have either caused or contributed to significant bulk system disturbances and cascading outages. Utah Municipal also concedes that some facilities rated at 100 kV and above may have been improperly excluded from classification in the bulk electric system, at least in the NPCC. However, Utah Municipal also states that unless the facilities described were not included in the bulk electric system of the applicable Regional Entities, the cited events do not show a flaw in the existing definition.<sup>82</sup> Utah Municipal also disputes the NOPR's claim of a historical precedent supporting the 100 kV threshold since the previous threshold

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<sup>82</sup> Utah Municipal at 8.

was presumptive rather than a “bright-line.” Utah Municipal recommends that the Commission allow WECC’s BESDTF to complete its work on a hybrid definition that utilizes a presumptive 100 kV threshold and a material impact assessment. Utah Municipal suggests that this model be used as a template for other Regional Entities’ bulk electric system definitions.

71. The WPSC and Consumers Energy state that without substantial refinement, the proposal will cause public utilities to experience significant but unnecessary compliance costs. Additionally, the WPSC anticipates that utilities would elect to build facilities below the 100 kV threshold to avoid “bright-line” oversight, which will in turn result in a lower voltage, less technically capable system and will therefore adversely affect reliability.<sup>83</sup>

### **(3) Commission Determination**

72. The Commission finds sufficient justification for the action in this Final Rule. The current definition has failed to ensure that all facilities necessary for operation of the interconnected transmission network are covered by the Reliability Standards. As discussed above, the current definition allows broad regional discretion without ERO or Commission oversight, which has resulted in reliability issues such as the exclusion of transmission serving bulk electric generators (including nuclear plants), inconsistency in classification at the seams that compromises the effectiveness of the Reliability

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<sup>83</sup> WPSC at 2-3.

Standards, routine TLR events on non-bulk electric system facilities, and the exclusion of elements necessary to operate the interconnected transmission network. Given the inconsistency of the application among regions and the reliability issues created as a result of the current definition, we conclude that it is necessary to direct the ERO to revise the definition of “bulk electric system” to ensure that all facilities necessary to operate the interconnected transmission network are included and to address the concerns noted herein. We believe that the Commission’s proposed approach of adopting a bright-line, 100 kV threshold, along with a NERC-developed, Commission-approved exemption process, as well as eliminating regional variations unless approved by the Commission as provided in Order No. 672,<sup>84</sup> is an appropriate action to ensure bulk electric system reliability.

73. As discussed in this Final Rule, many facilities operated at 100 kV and above have a significant effect on the overall functioning of the grid. The majority of 100 kV and above facilities in the United States operate in parallel with other high voltage and extra high voltage facilities, interconnect significant amounts of generation sources and operate as part of a defined flow gate, which illustrates their parallel nature and therefore their necessity to the reliable operation of the interconnected transmission system. Parallel facilities operated at 100-200 kV will experience similar loading as higher voltage parallel facilities at any given time and the lower voltage facilities will be relied upon

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<sup>84</sup> See Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 291.

during contingency scenarios. Further, as illustrated by the Commission's examples and as Bay Area Municipal states, 115 kV and 138 kV facilities have either caused or contributed to significant bulk system disturbances and cascading outages. Additionally, the current definition's broad regional discretion has allowed classification inconsistencies to develop within and along the borders of Regional Entities, as discussed in further detail herein.<sup>85</sup> The proposed 100kV threshold is intended to ensure facilities necessary for reliable operation are captured by the definition and to avoid entities exempting their facilities by any means other than through a Commission-approved exemption process.

74. While the Commission believes the solution described above is the best way to address the identified problems with the current definition, the ERO has the discretion to develop an alternate solution that is as effective as, or superior to, the Commission's proposed approach in addressing the identified technical and other concerns, and may not result in a reduction in reliability. If the ERO chooses to propose a different solution, it

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<sup>85</sup> See NERC Petition, Docket No. RM08-013-000, at 18 (filed July 30, 2008). There NERC indicated that the PRC-023 standard drafting team selected a voltage threshold for the Reliability Standard's applicability because the bulk electric system definition has too many variances to be effective for defining a Reliability Standards' applicability: "This conclusion [to use a voltage-specific-threshold] was reached by considering the potential variances in the facilities included as the bulk power system in different Regional Entities, together with an observation that the effects of the proposed reliability standard are not constrained to Regional boundaries. For example, if one Region has a purely performance-based criteria and an adjoining Region has a voltage-based criteria, these criteria may not permit consideration of the effects of protective relay operation in one Region upon the behavior of facilities in the adjoining Region."



must demonstrate that its proposal is equally effective or more effective at ensuring that all facilities necessary to operate the interconnected transmission network are captured by the definition and that the proposal will not produce the inconsistencies and inaccuracies that result from the current definition, as described in this Final Rule. The ERO must support any alternate proposal with a technical analysis that demonstrates and explains, with a technical record sufficient for the Commission to make an informed decision, how its proposal provides the same level of reliability as the Commission's proposal, and reflects the reality of how entities use and rely on their 100kV and above facilities.

75. Finally, we believe use of the term "operated at" rather than "rated at" together with the exemption methodology that NERC will develop as discussed in this Final Rule addresses the WPSC's concern that utilities may elect to build facilities below 100 kV to avoid oversight.

(i) **Impact-Based Methodology and Regional Variation**

76. Several commenters argue that the Commission did not adequately justify the proposed changes to the "bulk electric system" definition and that the technical examples provided similarly do not justify the proposed changes. In their opinion, an impact-based methodology is superior to the proposed approach. The Commission does not support using the material impact tests proffered by commenters as a basis for determining a facility's importance. Section 215 states that the Reliability Standards apply to facilities that are necessary for operating an interconnected electric energy transmission network (or any portion thereof). The material impact tests that either are under development or implemented appear to exclude facilities without regard to whether they are necessary to

operate the system, and instead seek to determine the impact of the loss of an element. The Commission is not aware of any consistent and comprehensive material impact test that the industry has implemented to date. The scale and magnitude of generation and load loss during the Astoria West event described herein further demonstrates the shortcomings of NPCC's material impact assessment in determining bulk electric system elements necessary to ensure reliable operation. We disagree with assertions that the Astoria West event was an invalid example, as the commenters did not provide sufficient evidence supporting their assertions.

77. We disagree with commenters who assert that NPCC's current material impact assessment, referred to as NPCC Document A-10, ensures that the proper facilities are included in the bulk electric system. Although the NPCC Document A-10 provides a test methodology to identify elements of the bulk electric system, the tests prescribed are subjective. In the test, a specific bus is subjected to a three-phase fault and the impacts on other buses are determined.<sup>86</sup> NPCC Document A-10 states that "a transient stability test may be done first to identify buses at which faults may cause a significant adverse impact outside of the 'local area.'"<sup>87</sup> The term "local area" is broadly defined and is

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<sup>86</sup> NPCC Document A-10 defines the term bus as "a junction with sensing or protection equipment within a substation or switching station at which the terminals of two or more elements are connected, regardless of whether circuit breakers are provided." See NPCC Document A-10 at page 2.

<sup>87</sup> See NPCC Document A-10 at 4.

open to interpretation.<sup>88</sup> Thus, under NPCC Document A-10, if an entity chooses a large geographical area for its “local area,” the impact resulting from a fault at a specific bus could be considered a “significant adverse impact,” but since the impact falls within the large “local area,” the bus may not be declared part of the bulk electric system. For example, if one entity defines the “local area” as the boundary of the balancing authority, while another entity defines the local area as adjacent buses, the outcome of the two tests could vary significantly. In particular, this likely could result in an exclusion of a large number of facilities from the purview of the bulk electric system for the first entity that applies a broader view of “local area.”

78. NPCC Document A-10 does not assess whether the facilities within the “local area” are necessary for reliable operation of the interconnected transmission network and also does not discuss system performance or any “significant adverse impact” on the facilities within the “local area.” Therefore, facilities within a local area could operate in an unstable manner or violate emergency operating limits, and as long as these adverse effects are contained within the defined “local area,” NPCC’s Document A-10 assessment would deem those facilities outside the scope of the bulk electric system. For

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<sup>88</sup> See NPCC Glossary of Terms, NPCC Document A-7 at 13-14 (“Local area - An electrically confined or radial portion of the system. The geographic size and number of system elements contained will vary based on system characteristics. A local area may be relatively large geographically with relatively few buses in a sparse system, or be relatively small geographically with a relatively large number of buses in a densely networked system.”).

these reasons, we believe NPCC's Document A-10 assessment has resulted in an inconsistent process that excludes facilities from the bulk electric system.

79. NARUC and other commenters contend that the Commission has not demonstrated any reliability issues created by NPCC's current methodology.<sup>89</sup> To the contrary, the NOPR noted that seven high and extra-high voltage lines in NPCC are not included in the bulk electric system under the current definition, including some serving nuclear power plants, and pointed to several events that occurred in other regions on facilities that may not have been included in the bulk electric system if they were under NPCC's current methodology. Additionally, thousands of megawatts of capacity resources are connected to these excluded transmission facilities.

80. Further, there is even inconsistency within NPCC in that a 345 kV tie-line between ISO-NE and NYISO is classified as part of the "bulk electric system" in one ISO but not the other. Regional classification inconsistencies can also lead to issues under TOP-002, Requirement R7.<sup>90</sup> If one Regional Entity or balancing authority within a region complies with TOP-002, Requirement R7 by ensuring system deliverability during a single contingency along its portion of an intra-regional tie-line while the other Regional Entity or the other balancing authority within the same region on the other end of the tie-

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<sup>89</sup> See, e.g., APPA, NRECA, CMUA, CPUC, and TANC.

<sup>90</sup> TOP-002, Requirement R7 provides that "each Balancing Authority shall plan to meet capacity and energy reserve requirements, including the deliverability/capability for any single Contingency."

line does not, during a contingency, deliverability is not ensured, which could lead to loss of load and undermine reliability.

81. Moreover, one of the main justifications for the Final Rule is to reduce inconsistencies across regions in order to increase the effectiveness of the NERC Reliability Standards. Some commenters challenge the supposition that regional inconsistency is a drawback of the current definition. Commenters state that regional variation allows regional entities to use their technical expertise to adopt a tailored regional bulk electric system definition. NARUC and Utah Municipal contend that a key part of the historical approach was the discretion of the Regional Entities.

82. In response, as the Commission stated in Order No. 672, uniform Reliability Standards, and uniform implementation, should be the goal and the practice, the rule rather than the exception, absent a showing that a regional variation is superior or necessary due to regional differences.<sup>91</sup> Consistency is important as it sets a common bar for transmission planning, operation, and maintenance necessary to achieve reliable operation. As noted, we have found several reliability issues with allowing Regional Entities broad discretion without ERO or Commission oversight. The Commission's proposed approach to addressing these concerns will enable affected entities to pursue exemptions for facilities they believe should not be included in the bulk electric system,

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<sup>91</sup> Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 290.

and also will allow Regional Entities to add facilities below 100 kV they believe should be included.

83. Additionally, Requirement R4 of PRC-001-1 (System Protection Coordination) requires that “[e]ach Transmission Operator shall coordinate protection systems on major transmission lines and interconnections with neighboring Generator Operators, Transmission Operators and Balancing Authorities.” If the protection systems on one end of the tie line that are not classified as bulk electric system are not coordinated with protection systems on the other end or with those protection systems on the major transmission lines connected to the same end, the protection system will not operate as desired and cascading outages are likely to occur. This could lead to a significant system event. Deficiencies and lack of coordination in protection systems have been and remain a major cause of power outages since the Reliability Standards became effective in June 2007.<sup>92</sup> These are but a few examples of how uniform application of the Reliability Standards to lines operated at 100 kV or above results in improved reliability. These examples demonstrate that NPCC’s current methodology does not necessarily accurately assess situations that warrant exclusion of facilities from the bulk electric system definition.

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<sup>92</sup> See e.g., *Mandatory Reliability Standards for the Bulk Power System*, Notice of Proposed Rulemaking, FERC Stats. & Regs., Proposed Regulations 2004-2007 ¶ 32,608, at P 280 (2006); *U.S.-Canada Power System Outage Task Force, Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations* 107 (2004) (Blackout Report), available at <http://www.ferc.gov/industries/electric/indus-act/reliability.asp>.

84. Separately, the NPCC impact-based test has excluded elements that interconnect generators, including multiple nuclear facilities. Nuclear facilities generally are significantly larger than other power plants, serve as base load, and often are critical to meeting capacity demand. They require external interconnections to provide power to auxiliary equipment within the plant under normal and emergency conditions, which includes issues related to black starts and system restoration. Additionally, many non-nuclear generators representing over 10,000 MW of capacity resources that are subject to reliability rules and which provide needed capacity are interconnected to the network through facilities that are not classified as bulk electric system facilities under NPCC's rules, which may undermine the reliability of the capacity provided. The facilities that these generators connect to tend to be 100 kV and above facilities that are operated in parallel with extra high voltage facilities and have numerous interconnections to the extra high voltage network while also serving some distribution facilities.

85. Given the questionable and inconsistent exclusions of facilities from the bulk electric system by the material impact assessment and the variable results of the Transmission Distribution Factor test proposed in NPCC's compliance filing in Docket No. RC09-3, there are no grounds on which to reasonably assume that the results of the material impact assessment are accurate, consistent, and comprehensive.<sup>93</sup> Additionally,

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<sup>93</sup> See WECC BESDTF Proposal V5 Appendix B, at B-11-B-12, *available at* <http://www.wecc.biz/Standards/Development/BES/Shared%20Documents/WECC-0058%20BES%20Comments%20Posting%205/P5%20Appendix%20B%20FINAL%20LEAN.doc>: "The BESDTF considered the Northeast Power Coordinating Council's

(continued...)

we have noted how the results of multiple material impact tests can vary depending on how the test is implemented. In contrast, the proposed “bright-line” test would continue the 100 kV threshold currently in use throughout much of the industry without allowing entities to vary this definition outside a Commission-approved exemption process.

Further, since most regions currently use the 100 kV general threshold, most regions should have little difficulty maintaining a 100 kV bright-line threshold. If NERC proposes an alternate methodology, it must ensure that the method is consistent, repeatable, and verifiable, which the material impact tests we have discussed are not.

86. With respect to the comments about the relevance of the FRCC, ReliabilityFirst and Astoria West events, and statements that they do not provide an adequate basis for our action here, the Commission emphasizes that for the Reliability Standards to have their intended outcome of protecting the system from instability, uncontrolled separation,

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Transfer Distribution Factor (TDF) approach to determining which networked Elements and facilities are used to distribute electricity locally and do not provide meaningful flow-through capability for the BES. In general, the TDF approach increases generation on one side of a transmission interface, decreases generation on the other side of the transmission interface, and measures the resulting change in flow across the interface. NPCC proposed that an Element with a TDF of less than 1% would not be part of the BES.

WECC staff expressed concern that the results of the TDF studies subjectively depended on which generating units had their output increased and which generating units had their output decreased. The results would also depend on the location, and what kind, of slack bus [a designated generator bus without a real power injection setting used in power system modeling for the purpose of producing or absorbing real power such as change in real losses, loss of generation or interchange] used in the power flow simulation. As a result, the BESDTF did not propose to adopt the TDF method to determine which networked facilities could be classified as Local Distribution Networks and excluded from the BES.”



or cascading failures, the bulk electric system definition must include the facilities necessary for reliable operation of the system and the registered entities must comply with the requirements of the Reliability Standards applicable to those facilities. If the definition excludes facilities that are necessary for reliable operation, the result is that more system events may occur, the impact of such events may be broader, and NERC and the Commission may have little or no authority to require the entities to mitigate the issues going forward. The FRCC, ReliabilityFirst and Astoria West examples demonstrate that, had all the relevant requirements in the Reliability Standards been adhered to, such as those in the PRC, IRO and TOP categories, the impacts of the events could have been minimized, if not avoided all together. The examples also illustrate that, because FRCC and ReliabilityFirst classify the facilities at issue as part of the bulk electric system, NERC and the Commission could require mitigation or take other action to ensure that the entities comply with the Reliability Standards in the future, thus enhancing system reliability. On the other hand, NERC and the Commission were unable to require mitigation with respect to the NPCC event because NPCC's definition excluded the facilities involved from the bulk electric system. We will address our specific concerns with each event in turn, below.

(ii) **FRCC Event**

87. The FRCC event originated from a single fault on a 138 kV facility, which is included in the "bulk electric system" according to FRCC's definition. This single 138 kV fault led to the loss of 22 transmission lines, 4,300 MW of generation, and 3,650 MW of customer service or load distributed over the lower two thirds of Florida. It is clear

from the facts that this was a wide-scale cascading outage, which deserves the Commission's attention. Subsequent to this event, Florida Power & Light implemented mitigation plans that would preclude similar problems. The Commission notes that if this same event had occurred in NPCC, the Commission or NERC would not have had the chance to require mitigation of the issue because these facilities would not be considered part of the bulk electric system.

(iii) **ReliabilityFirst Event**

88. Similarly, the June 13, 2008 event in ReliabilityFirst demonstrates how problems on 100-200 kV facilities can cascade into significant outages. As noted in NOPR, "the inappropriate operation of the relay on a 138 kV facility contributed to the loss of three 138 kV-13 kV transformers, three 138 kV transmission lines, and estimated loss of approximately 150 MW of firm load in a critical high population density area,"<sup>94</sup> that includes the White House, for over four hours.<sup>95</sup> Because ReliabilityFirst classifies these facilities as part of the bulk electric system, the circumstances are covered by the Reliability Standards. Thus, ReliabilityFirst, NERC and the Commission are able to require mitigation, which can be informed by the mandatory Reliability Standards. Facilities similar to those involved in this example would not, in NPCC, be included

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<sup>94</sup> NOPR, FERC Stats. & Regs. ¶ 32,654 at 22.

<sup>95</sup> See, e.g., WTOP story "*Friday the 13th*" *Blackout hits DC* (June 13, 2008), available at <http://www.wtop.com/?sid=1421434&nid=25>; CBS News story "Power Outage Knocks Out D.C. (June 13, 2008) ("The White house had been running on generator power,' said deputy press secretary Tony Fratto.") available at <http://www.cbsnews.com/stories/2008/06/13/national/main4178695.shtml>.

under the bulk electric system definition. Thus those facilities would not have to be operated pursuant to the Reliability Standards and, if a problem occurred, neither the Commission nor NERC could require a mitigation plan to be developed and completed.

(iv) **Astoria West Event**

89. On the other hand, the ConEd Astoria West facilities are not part of the bulk electric system according to NPCC's impact-based criteria. Nonetheless, as reported by the news media, the event resulted in widespread loss of load affecting around 385,000 people in parts of Manhattan and the Bronx.<sup>96</sup> The NYPSC identified the cause of the outage as a lightning strike not to any ConEd transmission facilities, but a communications facility. The Commission understands that this communication disruption to a protection system by itself did not cause any faults on the 138 kV facilities. However, as explained earlier, this non-fault (N-0) event resulted in the interruption of service to about 137,000 customers, affecting portions of two boroughs in New York City, as well as the loss of five generators and six 138 kV transmission lines. Unlike the FRCC event, ConEd was not required to mitigate, under section 215, the root cause of the Astoria event because the facilities are not included under the bulk electric

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<sup>96</sup> See, e.g., New York Times article, "Brief Power Failure Is Long Enough to Unsettle" (June 28, 2007), available at <http://query.nytimes.com/gst/fullpage.html?res=9A02E0DB163EF93BA15755C0A9619C8B63&sec=&spon=&&scp=1&sq=Brief%20Power%20Failure%20Is%20Long%20Enough%20to%20Unsettle&st=cse>; ABC News story "Power Back on in NYC after Outages" (June 27, 2007), available at <http://abclocal.go.com/wabc/story?section=weather&id=5428326>.

system definition. We note that these facilities are not included in the definition despite the fact that the 138 kV network is heavily interconnected to the extra-high voltage network through ten 138 kV phase angle regulators in 345 kV stations. Additionally, approximately 2,000 MW of capacity resources and a similarly large quantity of customer firm demand in the Astoria area is directly connected to the 138 kV network or supplied from the 138 kV to lower voltage levels via step-down transformers. While the NYPSC stated that ConEd did mitigate the communication issue at the cited location, it is not clear if ConEd addressed similar vulnerabilities at other locations or if other underlying root cause items were identified or addressed.<sup>97</sup>

(v) **Relevance of TLR**

90. Reliability Standard IRO-006-4.1 – Reliability Coordination – Transmission Loading Relief has the purpose of providing “Interconnection-wide transmission loading relief procedures that can be used to prevent or manage potential or actual [System Operating Limit] and [Interconnection Reliability Operating Limit] violations to maintain reliability of the Bulk Electric System.” The only time that transmission loading relief (TLR) procedures can be used is when a Reliability Coordinator is experiencing a potential or actual System Operating Limit (SOL)<sup>98</sup> or Interconnection Reliability

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<sup>97</sup> NYPSC at 10-11. The NYPSC’s comments do not specify whether ConEd took any action besides the telecommunications fixes.

<sup>98</sup> The NERC Glossary defines System Operating Limit as: “The value (such as MW, MVar, Amperes, Frequency or Volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria.”

Operating Limit (IROL)<sup>99</sup> on the bulk electric system within its Reliability Coordinator area.<sup>100</sup> The Commission understands that TLR procedures used to curtail firm and non-firm transactions<sup>101</sup> have been activated in NPCC on flowgates that contain facilities that are not part of the bulk electric system under NPCC's definition, but were needed to prevent or manage potential or actual SOL or IROL violations on the NPCC-defined bulk electric system. Since a flowgate generally defines facilities that operate in parallel and collectively respond to a transmission loading relief event as if it were a single transmission facility, it is logical that these 115 and 138 kV parallel facilities are included in these flowgates. Therefore, we disagree with ICNU's and NYSRC's claims that these facilities can be dismissed as unimportant. If a flowgate contains facilities that are needed to prevent or manage SOL or IROL violations, they should be included in the bulk electric system. Since the material impact test did not show this, this is another indication that the test does not adequately identify bulk electric system elements.

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<sup>99</sup> The NERC Glossary defines Interconnection Reliability Operating Limit as "A System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading Outages that adversely impact the reliability of the Bulk Electric System."

<sup>100</sup> See IRO-006-4.1, Requirement R1.

<sup>101</sup> Flowgate 7004 in NPCC, which contains non-bulk electric system facilities, had 31 TLR events totaling 484 hours in 2009 and 44 TLR events totaling 798 hours to date in 2010. Additionally, three other NPCC flowgates that contain non-bulk electric system facilities had TLR events called in 2009 and 2010. Specifically, flowgates 7001, 7002, and 7010 were collectively subject to 11 TLR events totaling 91 hours during that period. See *NERC Transmission Loading Relief Procedure Logs* (October 28, 2010) available at <http://www.nerc.com/filez/Logs/tlrlogs.html>.

(vi) **International Concerns**

91. Ontario Power contends that the Commission must explicitly state that the proposed change applies only to those jurisdictions within the United States. Ontario Power argues that although the Commission indicates that the proposal seeks to increase consistency across reliability regions by imposing a bright line definition, Ontario Power believes that implementation of the Order as currently proposed will not achieve this goal. Specifically, Ontario Power argues that the proposed modification “will simply move the point of demarcation from one methodology to the other (i.e., 100 kV threshold versus a performance-based approach) from Regional Entity borders to National borders.”<sup>102</sup> Ontario Power reiterates that it is not aware of any significant reliability issues attributable to the use of NPCC’s performance-based methodology. Accordingly, Ontario Power does not believe that Canadian jurisdictions maintaining the performance-based approach would suffer reduced reliability as compared to those who are required to adopt the 100 kV threshold.

92. Hydro-Québec contends that the NOPR’s proposal does not take into account the characteristics of the Québec Interconnection, particularly that it is asynchronous with the other systems that make up the Eastern Interconnection and thus is not freely influenced by power flows in other balancing areas. According to Hydro-Québec, application of the

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<sup>102</sup> Ontario Power at 4.

NERC Reliability Standards should be limited to facilities with a material impact on reliability, and this decision is best left to the Regional Entities.

93. The Joint Canadian Parties argue that the NOPR's proposal would result in the Reliability Standards being applied to the majority of facilities 100 kV and above, a significant number of which only impact the local area in the event of a contingency, and often under the purview of different regulatory authorities. Additionally, they state that the proposed "one-size fits all" approach does not give due consideration to either regional variations or the technical expertise of the regions. According to the Joint Canadian Parties, the impact-based methodology ensures that all facilities critical to wide-area reliability are included in the bulk electric system definition.

94. The Commission acknowledges that it does not have jurisdiction to enforce a modified definition with respect to non-U.S. entities. However, as Ontario Power correctly notes, the problems discussed above with respect to transmission lines classified as "bulk electric system" in one region but not classified as such in a connected region also can occur when lines cross the international border. Thus, we will, and we encourage NERC to, work with the Canadian authorities to ensure consistent treatment of transmission lines that cross the border.

95. In response to Ontario Power's statement that it is not aware of any significant reliability issues attributable to use of NPCC's material impact test, and the Joint Canadian Parties' argument that the NOPR proposal would result in Reliability Standards being applied to facilities that only impact the local area, we have discussed elsewhere in this order our concerns with the NPCC methodology including the reliability concerns

arising from that test's inconsistent results and our concerns with the subjective nature of the term "local area" as defined in NPCC Document A-10. We also note that the Final Rule directs the ERO to consider adopting an exemption process that would help alleviate the Joint Canadian Parties' concerns about a "one-size fits all" approach. Finally, because this Final Rule directs the ERO to develop a revised bulk electric system definition through the Standards Development process, the Canadian commenters will be able to raise and address a number of their substantive concerns in that forum.

**(4) Summary**

96. In general, the Final Rule identifies the reliability concerns created by the current definition and a method to ensure that certain facilities needed for the reliable operation of the nation's bulk electric system are subject to mandatory and enforceable Reliability Standards, and that exemption methodologies would be developed by NERC and subject to Commission review. From the Commission's review, the material impact assessments implemented by NPCC are subjective in nature, and results from such tests are inconsistent in application, as shown through the exclusion of facilities that clearly are needed for reliable operation. Further, we find that the vast majority of 100 kV and above facilities are part of parallel networks with high voltage and extra high voltage facilities and are necessary for reliable operation. As a result, and consistent with our previous statements in Order No. 672,<sup>103</sup> we find it is best for the ERO to establish a

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<sup>103</sup> Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 290.



uniform definition that eliminates subjectivity and regional variation in order to ensure reliable operation of the bulk electric system. We further find that the existing NPCC impact test is not a consistent, repeatable, and comprehensive alternative to the bright-line, 100kV definition we prefer. By directing the ERO to revise the definition of “bulk electric system,” through the approach proposed by the Commission, or through an equally effective alternative proposed approach, the Commission is fulfilling its responsibility to ensure reliable operation of the grid.<sup>104</sup> Any alternative proposal from the ERO must be as effective as, or more effective than the 100 kV threshold at ensuring facilities necessary for reliable operation are captured in the definition while also addressing the issues outlined in this Final Rule.

(d) **Usage and Definition of “Bulk-Power System”**

(1) **Comments**

97. Anaheim states that the Commission’s observation that the term “Bulk-Power System” is somehow broader than the term “bulk electric system,” coupled with its refusal to define, explain, or otherwise implement the statutory term, creates substantial uncertainty within the industry concerning the scope of the Reliability Standards going forward.

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<sup>104</sup> As noted previously, any alternative proposal must be as effective as, or superior to, the Commission’s proposed approach in addressing the identified technical and other concerns, and may not result in a reduction in reliability.

98. ReliabilityFirst states the use of the terms “bulk electric system” and “Bulk-Power System” at times has created confusion within the industry and in compliance enforcement matters. Therefore, ReliabilityFirst believes that NERC should formally document the use of both terms and, going forward, use a single term and definition for all compliance and enforcement of the Reliability Standards.<sup>105</sup>

99. SCE states that the industry has been seeking final resolution of the statutory term “Bulk-Power System” and requests that the Commission act now and through this Final Rule to resolve the statutory term “Bulk-Power System.” It requests that the Commission’s Final Rule recognize that the definition of “bulk electric system” developed under this Final Rule is identical to the statutory term “Bulk-Power System” and no further definitional change will take place.

**(2) Commission Determination**

100. In the NOPR, the Commission addressed the definition of “bulk electric system” and not the definition of the statutory term “Bulk-Power System.” Although the statutory term Bulk-Power System defines our jurisdiction, the Commission believes more clarity and certainty is achieved in this context by focusing on whether facilities are part of the bulk electric system. Ensuring that the bulk electric system definition encompasses all facilities necessary to reliably operate an interconnected electric transmission system will not cause the application of the Reliability Standards to extend beyond the jurisdiction

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<sup>105</sup> ReliabilityFirst at 10.

prescribed in section 215. The Commission, the ERO, and the Regional Entities will continue to enforce Reliability Standards for facilities that are included in the bulk electric system.

## **2. Exemption Process**

101. The NOPR proposed that a Regional Entity must seek ERO and Commission approval before exempting any transmission facility rated at 100 kV or above from compliance with mandatory Reliability Standards.<sup>106</sup> Pursuant to the NOPR proposal, a Regional Entity would submit proposed facility exclusions to the ERO and then, in turn, the ERO would submit to the Commission for review on a facility-by-facility basis any ERO-approved exception to the proposed threshold of all transmission facilities at 100 kV or above, except for radial transmission facilities serving only load with one transmission source. Any such submission would also include adequate supporting information explaining why it is appropriate to exempt a specific transmission facility that would otherwise satisfy the proposed 100 kV threshold. Only after Commission approval would the proposed exclusion take effect.

### **(a) Comments**

102. Most commenters disagree with the exemption process outlined in the NOPR, and several requested that the Commission abandon the NOPR's proposal or adopt a more streamlined process. NERC and other commenters characterize the Commission's

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<sup>106</sup> NOPR, FERC Stats. & Regs. ¶ 32,654 at P 18.

proposal as costly, time consuming, and potentially unworkable.<sup>107</sup> Some parties suggested alternatives, such as the Commission reviewing and approving a Regional Entity's exemption methodology rather than reviewing each individual's exemption application. Other commenters argue that the Commission should approve a methodology that allows the Regional Entities or ERO to perform a facility-by-facility review rather than the Commission.<sup>108</sup> Several commenters requested that the Commission adopt a blanket exemption for distribution facilities, as defined by the Regional Entities, or clarification that the Commission did not intend to include distribution facilities within the scope of the definition of bulk electric system.<sup>109</sup> Commenters also request that the Commission suspend enforcement of Reliability Standards to newly-classified bulk electric system facilities while the Regional Entities evaluate exemption requests.

103. APPA/NRECA argues that the NOPR's approach represents an extreme departure from current practice with respect to allowing appropriate exemptions from the Reliability Standards requirements. APPA/NRECA notes that entities seeking an exemption for even radial line facilities may require NERC and Commission approval

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<sup>107</sup> See, e.g., Alcoa, BPA, CMUA, Palo Alto, Redding, Constellation/CENG, ICNU, APPA/NRECA, National Grid, NERC, NESCOE, NCPA, NV Energy, Public Power Council, SWTDUG, NYSRC, SCE, State Utility Commissions and Consumer Counsel, TANC, TAPS, Utah Municipal, Wells, WPSC.

<sup>108</sup> See, e.g., EEI, BPA, Utility Services, Inc., NPCC, WECC, TAPS, Santa Clara, NUSCO, Indicated New York Transmission Owners, SWTDUG.

<sup>109</sup> See, e.g., GTC/GSOC, Redding, Dow, NV Energy, PGE, TIEC.

before that exemption would take effect, and that these entities would not only have the burden of obtaining the necessary approvals for the exemption but also would have to comply with the Reliability Standards while those approvals are pending.<sup>110</sup>

APPA/NRECA contends that the proposal could impose significant burdens on many smaller utilities, some of which have never been subject to Reliability Standards, without affording them any procedural protections and without imposing on Regional Entities the appropriate and parallel burden of demonstrating that expanded authority over low-voltage (less than 100 kV) facilities is necessary to preserve reliability.<sup>111</sup>

104. Alcoa points out that the proposal would increase the costs associated with their facilities in the NPCC region either through additional compliance measures associated with mandatory Reliability Standards or by obtaining approvals for an exemption from such requirements. EEI believes that NERC should determine whether to grant or deny a specific request for an exemption and that Commission approval should not be required in every case. Instead, an appeal to the Commission should be available as an option.

105. GTC/GSOC proposes that the definition for a blanket exemption of localized and load-serving lines include: an area serving load that is connected to the rest of that network at a single transmission substation at a single transmission voltage by one or more transmission circuits; tap lines and associated facilities that are required to serve local load only; and transmission lines that are operated open for normal operation.

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<sup>110</sup> APPA/NRECA at 19-23.

<sup>111</sup> *Id.* at 25-27.

106. On the other hand, Manitoba Hydro supports the Commission's proposal to require a Regional Entity to obtain NERC and Commission approval prior to exempting any facility rated at 100 kV or above, except for radial transmission facilities serving only load. Manitoba Hydro also believes regulatory review provides a wider opportunity for stakeholder review.

107. Several commenters argue that the Commission should direct modifications to section 500 of the NERC Rules of Procedure, which governs NERC's business practices, including its operation and review processes.<sup>112</sup> For example, NPCC proposes minimal revision to the NERC Rules of Procedure, Section 500 to include a process for evaluating bulk electric system exclusions recommended to NERC by the Regional Entities. NERC states that changes likely will be necessary in the NERC Rules of Procedure and the NERC Statement of Compliance Registry Criteria.

108. TIEC states that many industrial sites are interconnected to the grid through lines rated at or above 100 kV, or otherwise contain lines rated at 100 kV or above within a private use network. TIEC notes that although these lines are operated at a high voltage due to the size of the industrial loads, they are used to provide electric service to end-use industrial customers and do not serve a "transmission" function for the interconnected grid within the meaning of the Commission rules and NERC Reliability Standards. Instead, these facilities deliver electricity from the grid or a cogeneration facility to the

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<sup>112</sup> See, e.g., NERC, NPCC, and Utility Services.

consuming loads within a plant site. TIEC states that the Commission should clarify that customer-owned facilities that are used to distribute electricity to consuming facilities on the customer's premises, which do not therefore serve a "transmission" function for the interconnected grid, are not part of the bulk electric system. Alcoa contends that its industrial facilities are connected to the grid using 115 kV lines for efficiency purposes, but that they have no practical impact on the grid, and therefore would be improperly included in the bulk electric system by the proposal.

109. ExxonMobil suggests modifying the definition of the bulk electric system to include "those facilities rated at 100 kV or above intended for the transmission of power within an interconnected grid," i.e., ExxonMobil suggests that the Commission draw a distinction between facilities that could under limited circumstances transmit power but were not intended or designed to be a transmission path. ExxonMobil notes that in order to meet the reliability target requirements to safely and economically operate manufacturing and production facilities, many industrial facilities are fed by two or more utility transmission lines that originate at different utility substations. Due to the magnitude of an industrial site's load, these transmission lines are typically designed to operate at levels in excess of 100 kV at the request of the utility company. These transmission lines typically terminate into an interconnection facility, owned by the industrial facility, that networks the transmission lines together within the industrial facility's private use network in order to serve the load of the facility's private use network. ExxonMobil states that its proposed approach is consistent with the Commission's stated goal of requiring the Regional Entities to register transmission lines

that are operated at the 100 kV level and above; while at the same time clearly excluding end user facilities rated 100 kV or above.

110. ERCOT suggests that the Commission should consider imposing a parallel process for including facilities that are below 100 kV in the bulk electric system. ERCOT notes that presently, facilities below 100 kV generally are not considered part of the bulk electric system, but the Regional Entities can explicitly include facilities below 100 kV if they are deemed “critical facilities.” ERCOT states that “Regional Entities should not have unbounded unilateral discretion to make such designations given the potential impact to affected parties.”<sup>113</sup> Thus, consistent with the Commission’s proposal to subject all 100 kV and above exemptions to due process, ERCOT asks the Commission to consider imposing a similar process for the inclusion of facilities below 100 kV.

**(b) Commission Determination**

111. As mentioned above, the NOPR proposed an exemption process pursuant to which a Regional Entity would seek ERO and Commission approval before exempting a transmission facility rated at 100 kV or above from compliance with the Reliability Standards. In response to the NOPR proposal, we received numerous comments that the proposed exemption process would be costly, time-consuming and potentially unworkable. Other commenters expressed concern that the proposal was unduly burdensome, particularly on smaller entities. We continue to believe that an exemption

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<sup>113</sup> ERCOT at 2.



process is appropriate and is complementary to our directive, discussed earlier, that the ERO develop a revised definition of the term bulk electric system that addresses the concerns resulting from the current discretion of Regional Entities to develop alternative regional definitions of the term. However, we are persuaded by the commenters' concerns and the Final Rule does not adopt the exemption model proposed in the NOPR.

112. Rather than devising a revised exemption process in the Final Rule, we direct the ERO to develop a proposed exemption process. We believe that it is appropriate that NERC develop the process in its function as the ERO. Further, allowing the ERO to develop an appropriate exemption process should provide interested stakeholders an opportunity to participate in the development of the process, as requested by some commenters. This stakeholder participation should result in a process with practical application that is less burdensome than the NOPR proposal.

113. The ERO must submit the proposed exemption process within one year of the effective date of this Final Rule. After notice and opportunity for comment, the Commission will act on the ERO's proposal.

114. We will not dictate the substance or content of the exemption process in this Final Rule. Rather, we identify below several matters or concerns that should be addressed in an acceptable exemption process.

115. NERC should develop an exemption process that includes clear, objective, transparent, and uniformly applicable criteria for exemption of facilities that are not necessary for operating the grid. The ERO also should determine any related changes to

its Rules of Procedures that may be required to implement the exemption process, and file the proposed exemption process and rule changes with the Commission.

116. As indicated above, since we are not adopting the exemption model proposed in the NOPR, we no longer contemplate a process that requires Commission review of each request for exemption. However, in order to avoid an inconsistent application of the exemption process, NERC should oversee the facility-by-facility exemption process to ensure an objective and uniform application of the exemption criteria that it develops. NERC may consider delegating responsibilities for the exemption process to Regional Entities, so long as the process is clear and capable of being applied consistently, objectively and uniformly across all regions. However, consistent with our statements in Order No. 672 regarding the need for a strong ERO, NERC should maintain oversight of any Regional Entity activity.<sup>114</sup> We believe ERO oversight is also vital in ensuring consistent application of any nation-wide exemption criteria that the ERO develops.

117. While the Commission will not require that we review each exemption on a facility-by-facility basis, we would maintain the authority to conduct audits to determine the appropriateness of a particular exemption. We contemplate that a Commission staff audit would review the application of the exemption criteria developed by NERC in NERC's or a Regional Entity's determination to approve an exemption for a particular facility. However, to facilitate such audits, the ERO should maintain a list of exempted

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<sup>114</sup> Order No. 672, FERC Stats. & Regs ¶ 31, 204 at P 140, 654.

facilities that can be made available to the Commission upon request. NERC can decide how best to maintain the list, including determining whether or not to post it on the NERC website.

118. Additionally, the ERO should consider developing criteria for revoking an exemption if a particular transmission facility no longer qualifies for such an exemption. This may be appropriate, for example, when a transmission system in the vicinity undergoes a significant change.

119. A number of comments raised concerns that the Commission's directive that the ERO revise the definition of bulk electric system would result in the erroneous inclusion of distribution facilities within the definition. As we explained above, these arguments are unconvincing because the majority of facilities operated at or above 100 kV are parallel paths that are necessary for the reliable operation of the transmission system. In addition, the exemption process provides a means of ensuring that relatively high voltage distribution facilities are excluded from compliance with mandatory Reliability Standards. In this light, we believe that it would be beneficial for the ERO in maintaining a list of exempted facilities, to consider including a means to track and review facilities that are classified as local distribution to ensure accuracy and consistent application of the definition. Similarly, the ERO could track exemptions for radial facilities.

120. In response to comments seeking a blanket exemption for industrial facilities, the Commission is not inclined to grant categorical exemptions of any kind. However, NERC should consider the parties' concerns regarding exemption categories in developing an exemption process and criteria. Entities can submit specific facilities for

exemption through the NERC-developed exemption process. As previously discussed, radial facilities, as well as facilities used in the local distribution of electric energy as provided in section 215, will continue to be excluded.

121. We agree with ERCOT's suggestion that the ERO should develop a parallel process for including as part of the bulk electric system "critical" facilities, operated at less than 100 kV, that the Regional Entities determine are necessary for operating the interconnected transmission network. Currently, Regional Entities have the ability to include "critical" facilities operated below 100 kV.<sup>115</sup> We believe that it would be worthwhile for NERC to consider formalizing the criteria for inclusion of critical facilities operated below 100 kV in developing the exemption process. Additionally, we note that Order No. 716 creates a process to include critical facilities under NUC-001-1.<sup>116</sup> Similarly, we note that Order No. 733 creates an additional "add in" approach to sub-100 kV facilities that Regional Entities and planning coordinators have identified as critical to the reliability of the bulk electric system.<sup>117</sup>

### **3. Transition Process**

122. In the NOPR, the Commission proposed to allow a Regional Entity affected by the Commission's Final Rule to submit a transition plan that allows a reasonable period of

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<sup>115</sup> See, e.g., Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 77.

<sup>116</sup> *Mandatory Reliability Standard for Nuclear Plant Interface Coordination*, Order No. 716, 125 FERC ¶ 61,065, at P 51-53 (2008), *order on reh'g*, Order No. 716-A, 126 FERC ¶ 61,122 (2009).

<sup>117</sup> *Transmission Relay Loadability Reliability Standard*, Order No. 733, 130 FERC ¶ 61,221, at P 20-25, 47, 60, 62 (2010).

time for affected entities within that region to achieve compliance with respect to facilities that are subject to Commission-approved Reliability Standards for the first time.<sup>118</sup>

(a) **Comments**

123. Certain commenters argue that the NOPR fails to clearly detail a transition process for bringing additional facilities into compliance with Commission-approved Reliability Standards.<sup>119</sup> APPA/NRECA believe that *if* the definition of bulk electric system is ultimately modified, NERC should be responsible for developing a clear and achievable transition plan to bring new facilities (and entities) into compliance.<sup>120</sup> APPA/NRECA further note that the NOPR is somewhat inconsistent in its discussion of a transition plan and required compliance, recognizing at one point that a transition plan for newly-affected facilities would be appropriate while elsewhere stating that facilities falling within the broad definition of bulk electric system would only be exempt *after* Commission approval.<sup>121</sup>

124. National Grid requests that the Commission allow entities affected by the new rule the opportunity to develop a reasonable transition plan for bringing existing facilities into compliance with newly-applicable Commission-approved Reliability Standards, through

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<sup>118</sup> NOPR, FERC Stats. & Regs. ¶ 32,654 at P 27.

<sup>119</sup> *See, e.g.*, APPA/NRECA and Bay Area Municipal.

<sup>120</sup> APPA/NRECA at 4.

<sup>121</sup> *Id.* at 35.

a collaborative process involving NERC, Regional Entities, state commissions and other affected parties.<sup>122</sup> National Grid notes that the process for bringing all of its and its subsidiaries' newly-affected facilities into compliance could take several years and would require significant increases in operations and maintenance costs as well as capital expenditures.<sup>123</sup> National Grid suggests a transition period of 24-36 months would be necessary to study and to begin to implement compliance programs.<sup>124</sup>

125. Several commenters state that the Final Rule should include a sufficient transition period, and many propose specific minimum transition time periods.<sup>125</sup> For example, FRCC recommends a transition period of 24 months for Registered Entities to phase in compliance of additional facilities with Commission-approved Reliability Standards.<sup>126</sup>

126. NPCC recommends that the effective date of any new bulk electric system definition be 24 months following the Commission's Final Rule and that within 90 days of the Final Rule, all Registered Entities be required to submit implementation plans to bring all newly identified bulk electric system facilities into compliance and submit any

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<sup>122</sup> National Grid at 5.

<sup>123</sup> *Id.* at 3, 8 (estimating compliance costs for transmission planning standards alone to be \$75 million to \$125 million).

<sup>124</sup> *Id.* at 5-6.

<sup>125</sup> *See, e.g.*, APPA/NRECA, EEI, FRCC, NERC, NPCC, National Grid, NYISO, Northeast Utilities, Indicated New York Transmission Owners, and Utah Municipal.

<sup>126</sup> FRCC at 9.

needed changes in registration by the effective date of the bulk electric system definition.<sup>127</sup>

127. Likewise, NYISO recommends that the effective date of any new definition should be no sooner than 24 months following the effective date of a Commission order requiring compliance with that definition.<sup>128</sup> NYISO further argues that during the transition period, no parties should be required to self-report or be deemed non-compliant by NPCC.<sup>129</sup>

128. Several commenters request that the Commission provide for temporary waivers from enforcement of Commission-approved Reliability Standards while entities wait for initial exemption requests to be processed.<sup>130</sup> For example, Utility Services argues that the Commission must grant a temporary waiver for audit, certification, or other compliance requirements to any requesting Registered Entity while its application is pending at the regional, NERC, or Commission levels, as this process has already been deemed acceptable by the Commission in the technical feasibility exemptions for cyber security.<sup>131</sup> Similarly, ELCON argues that the Commission should clarify that a facility

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<sup>127</sup> NPCC at 5.

<sup>128</sup> NYISO at 8-9.

<sup>129</sup> *Id.*

<sup>130</sup> *See, e.g.*, Utility Services, Dow, and ELCON.

<sup>131</sup> Utility Services at 5.

will not be subject to the obligations of registered status until the notification and any review process, followed by the transition period, is completed.<sup>132</sup>

129. Dow argues that the Commission must afford companies an opportunity to secure facility-specific exemptions before the Commission-approved Reliability Standards become applicable to those facilities.<sup>133</sup>

130. NYISO further argues that during the transition period no parties should be required to self-report or be deemed non-compliant by a Regional Entity.

**(b) Commission Determination**

131. As discussed above, we are directing the ERO to revise the definition through the Standards Development Process. We direct NERC to work with the Regional Entities affected by this Final Rule to submit for Commission approval transition plans that allow a reasonable period of time for the affected entities within each region to achieve compliance with respect to facilities that are subject to Commission-approved Reliability Standards for the first time based on a revised bulk electric system definition. The Commission expects that NPCC is the only region that will be significantly affected. Based on ReliabilityFirst's experience in adopting a "bright-line" definition for bulk electric system facilities, we expect transition periods not to exceed 18 months from the time the Commission approves a revised definition and exemption process, unless the Commission approves a longer transition period based on specific justification. The

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<sup>132</sup> ELCON at 5.

<sup>133</sup> Dow at 7.



Commission directs NERC to file the proposed transition plans within one year of the effective date of this Final Rule.

132. While the Commission is sensitive to commenters' concerns regarding non-compliance during the transition period, the Commission will not provide a trial period, as we declined to do in Order No. 693,<sup>134</sup> with respect to those facilities that are subject to Commission-approved Reliability Standards for the first time. We expect that the transition periods will be long enough for exemption requests to be processed and to allow entities to bring newly-included facilities into compliance prior to the mandatory enforcement date. Additionally, the ERO and Regional Entities may exercise their enforcement discretion during the transition period.

#### **4. Cost Recovery**

##### **(a) Comments**

133. The Indicated New York Transmission Owners requested that the Commission provide a new process to ensure recovery for costs incurred by NPCC members to comply with implementation of the new definition of bulk electric system.<sup>135</sup> While not seeking a specific cost recovery mechanism, other commenters noted their concern that the transition period established by the Commission must be sufficient to allow affected companies to recover any one-time or annual compliance costs incurred.<sup>136</sup> NYISO

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<sup>134</sup> Order No. 693, FERC Stats. and Regs. ¶ 31,242 at P 221-222.

<sup>135</sup> Indicated New York Transmission Owners at 11.

<sup>136</sup> *See, e.g.*, Northeast Utilities at 6.

states that implementing the 100 kV “bulk electric system” definition in the New York Control Area will cause it to incur increased capital costs and staff additions for which cost recovery will be required.<sup>137</sup>

(b) **Commission Determination**

134. We note that the Commission has adopted an explicit rule, as required under Section 219(b)(4) of EPAct 2005, allowing the recovery of “all prudently incurred costs necessary to comply with mandatory reliability standards issued pursuant to section 215,”<sup>138</sup> and that the proposed modifications to the definition of bulk electric system do not raise any new issues with respect to cost recovery of reliability compliance costs. Finally, the transition plan that we direct herein will facilitate an opportunity for transmission owners and any other affected entities to recover any one-time or annual costs of compliance that result from any changes to the definition of “bulk electric system” as ultimately adopted by NERC.

5. **Issues Regarding the Western Interconnection**

(a) **Comments**

135. Several entities from the Western Interconnection state that the proposal should not apply to the Western Interconnection because the West is built and operated

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<sup>137</sup> NYISO at 11.

<sup>138</sup> 16 U.S.C. 824s(b)(4)(A); *see also* 18 CFR § 35.35(f)(2010).

differently.<sup>139</sup> The parties argue that 100 - 200 kV facilities in the West are often used for distribution of power and have a limited or no impact on reliability over the wider area.<sup>140</sup> Multiple entities supported utilizing a technical test to differentiate which facilities should be included, such as the material impact assessment methodology currently being developed by the WECC BESDTF.<sup>141</sup> Several commenters also argue that the proposal would be expensive to implement while providing minimal reliability benefits.

136. State Utility Commissions and Consumer Counsel state that facilities ranging from 100-199 kV in the West are typically used for radial distribution or local area distribution networks, and not necessarily for bulk power transmission.<sup>142</sup> They believe that a 200 kV bulk electric system threshold reflects the usage and history of the Western Interconnection.<sup>143</sup> They further argue that nearly all new transmission in the West is being built at 500 and 230 kV and that the average line capacity of 100-199 kV lines makes up a very small percentage of the overall network capacity in the West.<sup>144</sup>

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<sup>139</sup> See, e.g., WECC, State Utility Commissions and Consumer Counsel, WPSC, Joint Western Commenters, Snohomish.

<sup>140</sup> *Id.*

<sup>141</sup> See, e.g., Bay Area Municipal, Joint Western Commenters, Redding, NV Energy, Snohomish, Tacoma Power, Utah Municipal.

<sup>142</sup> State Utility Commissions and Consumer Counsel at 2.

<sup>143</sup> *Id.*

<sup>144</sup> *Id.*

137. The WPSC notes that certain utilities within its service area have elected to build distribution facilities above 100 kV, and such utilities could become subject to substantial compliance costs without measurable benefits under the proposed bright-line rule.<sup>145</sup>

Moreover, if the 100 kV threshold is adopted, certain commenters are concerned that utilities will elect to build facilities below 100 kV in order to avoid complying with the Commission-approved Reliability Standards.<sup>146</sup>

138. Likewise, Utah Municipal argues that any proposal to classify facilities in excess of 100kV as part of the bulk electric system may be appropriate for the Eastern Interconnection, but that such an approach is inappropriate and extremely burdensome for entities in the Western Interconnection.<sup>147</sup> Utah Municipal further notes that the NOPR does not address the “demonstrable differences between the Western and Eastern Interconnections,” i.e., that the spread out nature of the West makes use of lines over 100 kV appropriate for use as distribution lines.<sup>148</sup> Rather than adopting an across the board change in each region’s approach to determining “bulk electric system” facilities, Utah Municipal recommends letting the WECC BESDTF finish work on its hybrid threshold and material impact assessment classification, and requests that the Commission defer to

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<sup>145</sup> WPSC at 2-3.

<sup>146</sup> *Id.* at 2-3, 5; Utah Municipal at 6-7.

<sup>147</sup> Utah Municipal at 5-7.

<sup>148</sup> *Id.* at 8.

the technical experts at Regional Entities such as WECC regarding any bulk electric system definition change.<sup>149</sup>

(b) **Commission Determination**

139. The Commission does not agree with the commenters' arguments that 100-199 kV facilities in the Western Interconnection should be treated differently than facilities in the Eastern Interconnection as a threshold matter. The bulk electric system definition should include all facilities that are necessary for operating an interconnected electric transmission network. While commenters have implied that not all 100-199 kV facilities are needed for reliable operation, the Commission notes that 100 kV and some lower voltage facilities are included in some of the WECC Rated Paths. Clearly, these facilities are operationally significant and needed for reliable operation as identified by certain WECC documents.<sup>150</sup> Any entity wishing to seek exemption of non-radial facilities from compliance with Commission-approved Reliability Standards may utilize the exemption process NERC will develop. While the Western Interconnection has a higher percentage of transmission facilities above 200 kV compared to the Eastern Interconnection,<sup>151</sup> it is how the lines below 200 kV are interconnected with higher voltage facilities that determines their significance.

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<sup>149</sup> *Id.* at 13.

<sup>150</sup> *See* WECC Rated Path Catalog.

<sup>151</sup> In the Western Interconnection, 59 percent of the total circuit miles of transmission lines above 100 kV also are above 200 kV, compared to 43 percent in the Eastern Interconnection. *See* NOPR, FERC Stats. & Regs. ¶ 32,654 at n. 36.

140. Therefore, commenters have not provided adequate explanation in this proceeding, supported by data and analysis, as to why there is a physical difference upon which to treat the Western Interconnection differently. In fact, the present WECC definition uses 100 kV as the threshold for classifying bulk electric system facilities.<sup>152</sup> The Commission understands that the audits performed by WECC and self-reporting by entities includes all facilities 100 kV and above.<sup>153</sup>

141. Further, the suggestion that the modifications should not apply to the West contradicts guidance regarding Reliability Standards from Order No. 672. Order No. 672 details several factors the Commission will consider in determining whether a proposed Reliability Standard is just and reasonable. One of the factors indicates that a “proposed Reliability Standard should be designed to apply throughout the interconnected North American Bulk-Power System, to the maximum extent this is achievable with a single Reliability Standard.”<sup>154</sup> Moreover, and particularly compelling with respect to the definition of bulk electric system, Order No. 672 indicates that proposed Reliability Standards “should be clear and unambiguous regarding what is required and who is required to comply.”<sup>155</sup> Eliminating broad regional discretion without ERO or Commission oversight and maintaining a 100kV bright-line definition, coupled with an

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<sup>152</sup> See <http://www.wecc.biz/Standards/Development/BES/default.aspx>.

<sup>153</sup> June 2007 Filing at 13-14.

<sup>154</sup> Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 331.

<sup>155</sup> *Id.* at P 325.

exemption process, removes any ambiguity regarding who is required to comply and accomplishes the goal of reducing inconsistencies across regions. Commenters have not provided compelling evidence that the proposed definition should not apply to the United States portion of the Western Interconnection as a threshold matter. As Order No. 672 detailed, however, the regions may propose: (1) a regional difference that is more stringent than the continent-wide definition, including a regional difference that addresses matters that the continent-wide definition does not; or (2) a regional definition that is necessitated by a physical difference in the Bulk-Power System. Should a region decide to propose a regional difference, in addition to the criteria above, such a proposal must address the Commission's concerns with the present definition with the understanding that any such alternative must be as effective as, or more effective than, the Commission's proposed approach in addressing the identified technical and other concerns, and may not result in a reduction in reliability.<sup>156</sup>

## **6. Impact on Generation Owners and Operators**

### **(a) Comments**

142. NERC and several other commenters raise the concern that the revised definition could bring a large number of generator owners and generator operators within the ambit of the Reliability Standards for the first time, and could result in an extremely large

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<sup>156</sup> See, e.g., *Version One Regional Reliability Standard for Resource and Demand Balancing*, 133 FERC ¶ 61,063, at P 14 (2010); *North American Electric Reliability Corporation Reliability Standards Development and NERC and Regional Entity Enforcement*, 132 FERC ¶ 61,217 at P 112 (2010).

number of exemption requests despite the fact that the relevant facilities can have limited or no impact on the Bulk-Power System.<sup>157</sup> NERC and other commenters generally request that the Ad Hoc Group for Generator Requirements at the Transmission Interface (the “GOTO task force”)<sup>158</sup> findings and process be taken into account as part of any final Commission rule, and/or that any new “bulk electric system” definition otherwise adopted be developed in concert with the GOTO task force findings.<sup>159</sup>

143. A few other parties request additional clarification with respect to the proposed rule’s applicability to generation facilities. The U.S. Department of the Interior suggests that the Commission clarify its policy regarding the exclusion of radial lines from the bulk electric system definition, such that transmission facilities linking small generators are also treated as excluded radial lines.<sup>160</sup> WECC notes that the Commission’s proposed bright-line standard is somewhat unclear, in that parts of the NOPR suggest that the 100

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<sup>157</sup> NERC at 12-14; *see also* Palo Alto at 6-7, NCPA at 6-10.

<sup>158</sup> NERC has undertaken an initiative to address the special circumstances associated with generators and to determine which Reliability Standards might be inappropriate for such limited facilities. The GOTO task force was formed in February 2009, and included a broad array of participants across regions and industry segments, with representatives from operating and planning perspectives. The GOTO task force developed a Final Report, issued in November 2009, and has submitted a Standards Authorization Request to NERC to implement its proposed recommendations. *See* Final Report from the Ad Hoc Group for Generator Requirements at the Transmission Interface and related materials, *available at* [http://www.nerc.com/filez/standards/Project2010-07\\_GOTO\\_Project.html](http://www.nerc.com/filez/standards/Project2010-07_GOTO_Project.html).

<sup>159</sup> NERC at 14; Palo Alto at 7, NCPA at 9-10.

<sup>160</sup> U.S. Department of Interior at 1-2 (suggesting that small generators be defined as set out in the NERC Statement of Compliance Registry Criteria, Section III(c)).



kV standard would apply only to transmission facilities, while the current “bulk electric system” definition used by NERC applies to transmission, generation, and interconnection facilities.

(b) **Commission Determination**

144. We expect that our decision to direct NERC to develop a uniform modified definition of “bulk-electric system” will eliminate regional discretion and ambiguity. The change will not significantly increase the scope of the present definition, which applies to transmission, generation and interconnection facilities. The proposed exemption process will provide sufficient means for entities that do not believe particular facilities are necessary for operating the interconnected transmission system to apply for an exemption.

145. As noted above, NERC has undertaken an initiative to address the special circumstances associated with such generators.<sup>161</sup> Although the NERC Board of Trustees has not approved any action arising from the GOTO task force at this time, the task force members may submit their comments and report to NERC for its consideration as NERC develops an exemption process.

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<sup>161</sup> The GOTO task force was formed in February 2009, and included a broad array of participants across regions and industry segments, with representatives from operating and planning perspectives. The GOTO task force developed a Final Report, issued in November 2009, and has submitted a Standards Authorization Request to NERC to implement its proposed recommendations. NERC and other commenters generally request that the GOTO task force findings and process be taken into account as part of any final Commission rule, and/or that any new “bulk electric system” definition otherwise adopted be developed in concert with the GOTO task force findings.

## 7. Clarifying Terms

### (a) Comments

146. Several commenters seek clarification on the definitions and implications of specific terms and concepts such as “integrated transmission element” and “material impact.”<sup>162</sup>

147. For example, the North Carolina Independent Cooperatives request that the Commission clarify the terms “integrated transmission element” and “material impact.” They state that unless these terms are clarified there is a real danger that very small facilities will be unnecessarily included in the bulk electric system and their owners subjected to unreasonable compliance costs. The North Carolina Independent Cooperatives propose that the Commission adopt additional factors to determine the types of facilities that fall within or outside of the scope of these terms.

148. ReliabilityFirst requests clarification on whether transformers with a high side winding above 100 kV and a low side winding below 100 kV are included in the bulk electric system definition. It argues that, to eliminate uncertainty, “any and all” facilities that operate at 100 kV or above should be considered bulk electric system facilities, even if, for example, one transformer winding operates below 100 kV.<sup>163</sup>

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<sup>162</sup> See, e.g., North Carolina Independent Cooperatives, SWTDUG.

<sup>163</sup> ReliabilityFirst at 6.

(b) **Commission Determination**

149. With regard to ReliabilityFirst's comments, we agree with its developed delineation point with regard to "step-down" transformers, but note that these kinds of refinements can and should be addressed as part of NERC's exemption process.

150. We disagree with commenters that definitions of "integrated transmission elements" and "material impact" are needed to implement this Final Rule. These terms are not defined by the present bulk electric system definition, and defining these terms is not necessary to revise the definition as directed herein. Whether specific facilities have a material impact is not dispositive with respect to whether they are needed for reliable operation. These questions are more appropriately addressed through development of an exemption process at NERC.

**III. Information Collection Statement**

151. The information collection requirements in this Final Rule are identified under the Commission data collection, FERC-725-A "Revision of Definition of Bulk Electric System." Under section 3507(d) of the Paperwork Reduction Act of 1995,<sup>164</sup> the proposed reporting requirements in the subject rulemaking will be submitted to OMB for review. Interested persons may obtain information on the reporting requirements by contacting the Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426 (Attention: Michael Miller, Office of the Executive Director,

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<sup>164</sup> 44 U.S.C. 3507(d).

202-502-8415) or from the Office of Management and Budget (Attention: Desk Officer for the Federal Energy Regulatory Commission, fax: 202-395-7285, e-mail: oira\_submission@omb.eop.gov).

152. The “public protection” provisions of the Paperwork Reduction Act of 1995 require each agency to display a currently valid control number and inform respondents that a response is not required unless the information collection displays a valid OMB control number on each information collection or provides a justification as to why the information collection number cannot be displayed. In the case of information collections published in regulations, the control number is to be published in the Federal Register.

153. Public Reporting Burden: In the NOPR, the Commission based its estimate of the Public Reporting Burden on its belief that only one Regional Entity, NPCC, would be immediately affected by the Commission’s proposal. In particular the Commission stated that the transmission owners, transmission operators and transmission service providers in the U.S. portion of the NPCC region would be affected by the Commission’s proposal. Based on registration information available on NPCC’s website, it appeared that approximately 33 transmission owners, transmission operators and transmission service providers in the U.S. portion of the NPCC region would potentially be affected by the Commission’s proposal.<sup>165</sup> These entities are currently responsible for complying with

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<sup>165</sup> “NPCC Registered Entities as of January 13, 2010,” available on the NPCC website: <http://www.npcc.org/>.

applicable mandatory Reliability Standards approved by the Commission in Order No. 693 and subsequent orders. Given these parameters, the Commission estimated the Public Reporting Burden as follows:

Data Collection	No. of Respondents	No. of Responses	Hours Per Respondent	Total Annual Hours
FERC-725-A				
Transmission Owners, Transmission Operators and Transmission Service Providers in the U.S. portion of the NPCC Region:	33	1	Reporting: 0	Reporting: 0
			Recordkeeping: 500	Recordkeeping: 16,500
Total				16,500

154. Based on the available information, the Commission estimated that 33 entities would be affected by the proposal. The Commission also estimated that it would require 16,500 total annual hours for collection (reporting and recordkeeping) and that the average annualized cost of compliance would be \$660,000 (\$40/hour for 16,500 hours; the Commission based the \$40/hour estimate on \$17/hour for a file/record clerk and \$23/hour for a supervisor).

155. Commenters argue that the Commission has severely underestimated the potential impact of the change in the definition of bulk electric system and the exemption process as proposed in the NOPR. APPA/NRECA asserts that the NOPR is deficient in its

assessment of the public reporting burden.<sup>166</sup> APPA/NRECA argues that the burden of compliance and/or of obtaining exempt status is significant and reaches far beyond entities in NPCC. Moreover, APPA/NRECA notes that the Commission has used underlying assumptions about the kind and cost of work needed to comply with the change in rules that significantly underestimate the costs associated with compliance. Finally, APPA/NRECA argues that the NOPR is deficient in failing to make any assessment of the increased burden related to the change in the Commission's approach to allowing lower-voltage (less than 100 kV) facilities to be included as part of the bulk electric system by a Regional Entity.

156. Snohomish argues that the NOPR does not reflect the existing practice outside NPCC and that the Commission is simply wrong in asserting that the NOPR proposal would not substantially increase regulatory compliance burdens. Snohomish asserts that the Commission's stated basis for compliance with the Paperwork Reduction Act and associated regulations is incorrect.

157. Given the Commission's decision to direct NERC to develop a revised bulk electric system definition, rather than implement the NOPR's proposal, and by granting certain clarifications, some of the comments are no longer relevant and the remainder are best responded to in a future order addressing the revised definition developed by NERC. By directing NERC to develop a revised definition, the Commission is maintaining the

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<sup>166</sup> APPA/NRECA at 37-40.

status quo (i.e., the current bulk electric system definition) until the Commission approves a revised definition. Thus, the Commission's action does not add to or increase entities' reporting burden.

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

158. The Commission is required to prepare an Environmental Assessment or an Environmental Impact Statement for any action that may have a significant adverse effect on the human environment.<sup>167</sup> The Commission has categorically excluded certain actions from this requirement as not having a significant effect on the human environment. The actions proposed here fall within the categorical exclusion in the Commission's regulations for rules that are clarifying, corrective or procedural, for information gathering, analysis, and dissemination.<sup>168</sup> Accordingly, neither an environmental impact statement nor environmental assessment is required.

159. Greenburgh Environmental Forum LORAX Working Group (Greenburgh) states that the Commission must address the environmental impact of the NOPR on the human environment.<sup>169</sup>

160. We disagree with Greenburgh. Any revised bulk electric system definition the ERO develops will not modify thresholds established in individual Reliability Standards

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<sup>167</sup> *Regulations Implementing the National Environmental Policy Act*, Order No. 486, 52 FR 47897 (Dec. 17, 1987), FERC Stats. & Regs., Regs. Preambles 1986-1990 30,783 (1987).

<sup>168</sup> 18 CFR § 380.4(a)(5).

<sup>169</sup> Greenburgh at 2.

such as FAC-003 with respect to vegetation management. The Final Rule requires the ERO to clarify which facilities will be included within the definition of “bulk electric system” and the actions proposed here fall within the categorical exclusion in the Commission’s regulations for rules that are clarifying, corrective or procedural, for information gathering, analysis, and dissemination.

## **V. Regulatory Flexibility Act Analysis**

161. The Regulatory Flexibility Act of 1980 (RFA) generally requires a description and analysis of any final rule that will have significant economic impact on a substantial number of small entities. The RFA does not mandate any particular outcome in a rulemaking, but rather requires consideration of alternatives that are less burdensome to small entities and an agency explanation of why alternatives were rejected.

162. In drafting a rule, an agency is required to: (1) assess the effect that its regulation will have on small entities; (2) analyze effective alternatives that may minimize a regulation’s impact; and (3) make the analyses available for public comment. In its NOPR, the agency must either include an Initial Regulatory Flexibility Act Analysis (Initial Analysis) or certify that the proposed rule will not have a “significant impact on a substantial number of small entities.”

163. If, in preparing the NOPR, an agency determines that the proposal could have a significant impact on a substantial number of small entities, the agency shall ensure that small entities will have an opportunity to participate in the rulemaking procedure.

164. In its Final Rule, the agency must also either prepare a Final Regulatory Flexibility Act Analysis (Final Analysis) or make the requisite certification. Based on the comments



the agency receives on the NOPR, it can alter its original position as expressed in the NOPR but it is not required to make any substantive changes to the proposed regulation.

165. The statute provides for judicial review of an agency's final RFA certification or Final Analysis. An agency must file a Final Analysis demonstrating a "reasonable, good-faith effort" to carry out the RFA mandate. However, the RFA is a procedural, not a substantive, mandate. An agency is only required to demonstrate a reasonable, good faith effort to review the impact the proposed rule would place on small entities, any alternatives that would address the agency's and small entities' concerns and their impact, provide small entities the opportunity to comment on the proposals, and review and address comments. An agency is not required to adopt the least burdensome rule. Further, the RFA does not require an agency to assess the impact of a rule on all small entities that may be affected by the rule, only on those entities that the agency directly regulates and that are subject to the requirements of the rule.

**A. NOPR Proposal**

166. In the NOPR, the Commission stated that the immediate effect of the proposed directive that the ERO revise its current definition of bulk electric system to establish a 100 kV threshold would likely be limited to certain transmission owners, transmission operators and transmission service providers in the U.S. portion of the NPCC region. Most transmission owners, transmission operators and transmission service providers do not fall within the definition of small entities. The Commission estimated that approximately four of the 33 transmission owners, transmission operators and transmission services providers may fall within the definition of small entities. The

Commission determined that this rule will not have a significant economic impact on a substantial number of small entities. Accordingly, no regulatory flexibility analysis is required.

**B. Comments**

167. APPA/NRECA state that the Commission's RFA statement is flawed, in that the likely impacts of the proposed rule will reach far beyond entities in NPCC.

APPA/NRECA argues that it is a substantial possibility that a substantial number of entities outside of NPCC will be affected by the proposal. As such, it asks for a delay in implementing the proposal in order to avoid impacting a broader group of smaller entities.<sup>170</sup>

168. TAPS generally supports the APPA/NRECA comments on the Commission's RFA analysis. TAPS argues that the NOPR's RFA Certification, which states that only a few (presumably already-registered) Transmission Owners, Transmission Operators, and Transmission Service Providers in the NPCC footprint would be affected by this rulemaking, is fatally flawed.<sup>171</sup>

**C. Commission Determination**

169. The Commission disagrees with commenters that challenge the Commission's conclusion that the rule will not have a significant economic impact on a substantial number of small entities. Commenters have not made specific assertions regarding how

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<sup>170</sup> APPA/NRECA at 41-42.

<sup>171</sup> TAPS at 12.

the Commission's analysis is erroneous or in what ways the Final Rule will have a significant economic impact on a substantial number of small entities. As the Commission stated in its NOPR, most transmission owners, transmission operators and transmission service providers do not fall within the definition of small entities. Further, the Commission has suggested that the ERO create an appropriate exemption process and this will further ensure that the Final Rule minimally affects small entities. In addition, the ability of Regional Entities to identify "critical" facilities, operated at less than 100 kV, and require these facilities to comply with mandatory Reliability Facilities is not new. Our direction here that the ERO formalize the process for including such facilities will provide additional protections to small entities. Based on this analysis, we certify that this Final Rule will not have a significant economic impact on a substantial number of small entities. Accordingly, no further RFA analysis is required.

## **VI. Document Availability**

170. In addition to publishing the full text of this document in the Federal Register, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the Internet through the Commission's Home Page (<http://www.ferc.gov>) and in the Commission's Public Reference Room during normal business hours (8:30 a.m. to 5:00 p.m. Eastern time) at 888 First Street, NE, Room 2A, Washington, DC 20426.

171. From the Commission's Home Page on the Internet, this information is available on eLibrary. The full text of this document is available on eLibrary in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this

document in eLibrary, type the docket number excluding the last three digits of this document in the docket number field.

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

## **VII. Effective Date and Congressional Notification**

173. These regulations are effective [insert date that is 60 days from the date this Final Rule is published in the **FEDERAL REGISTER**]. The Commission has determined, with the concurrence of the Administrator of the Office of Information and Regulatory Affairs of OMB, that this rule is not a "major rule" as defined in section 351 of the Small Business Regulatory Enforcement Fairness Act of 1996.

### **List of subjects in 18 CFR Part 40**

Electric power, Electric utilities, Reporting and recordkeeping requirements.

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.

## Appendix A

Commenter	Abbreviation
Alcoa Inc. and Alcoa Power Generating Inc.	Alcoa
American Public Power Association and the National Rural Electric Cooperative Association	APPA/NRECA
Baltimore Gas and Electric Company	BGE
Bay Area Municipal Transmission Group	Bay Area Municipal
Bonneville Power Administration	BPA
California Municipal Utilities Association	CMUA
California Public Utilities Commission	CPUC
Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., Long Island Power Authority, New York Power Authority, New York State Electric & Gas Corporation, Orange and Rockland Utilities, Inc. and Rochester Gas and Electric Corporation	Indicated New York Transmission Owners
City of Anaheim, California	Anaheim
City of Palo Alto, California	Palo Alto
City of Redding, California	Redding
City of Santa Clara, California d/b/a Silicon Valley Power	Santa Clara
Constellation Energy Commodities Group, Inc., Constellation Energy Control and Dispatch, LLC, Constellation Energy Nuclear Group, LLC, Constellation NewEnergy, Inc. and Constellation Power Source Generation, Inc.	Constellation/CENG
Consumers Energy Company	Consumers Energy
Dow Chemical Company	Dow
Duke Energy Corporation	Duke Energy
Edison Electric Institute	EEI
Electric Reliability Council of Texas, Inc.	ERCOT
Electricity Consumers Resource Council	ELCON
ExxonMobil Research and Engineering	ExxonMobil

Commenter	Abbreviation
Florida Reliability Coordinating Council	FRCC
Georgia Transmission Corporation and Georgia System Operations Corporation	GTC/GSOC
Greenburgh Environmental Forum LORAX Working Group	Greenburgh
Hydro-Québec TransÉnergie	Hydro-Québec
Independent Electricity System Operator, Hydro One Networks Inc., Ontario Power Generation Inc., Five Nations Energy Inc., Brookfield Renewable Power Inc., New Brunswick System Operator, and Nova Scotia Power Inc.	Joint Canadian Parties
Industrial Customers of Northwest Utilities	ICNU
ISO New England Inc.	ISO-NE
Large Public Power Council	
Manitoba Hydro	
National Association of Regulatory Utility Commissioners	NARUC
National Grid USA	National Grid
Nevada Power Company and Sierra Pacific Power Company, d/b/a NV Energy	NV Energy
New England States Committee on Electricity	NESCOE
New York Independent System Operator, Inc.	NYISO
New York State Public Service Commission	NYPSC
New York State Reliability Council, L.L.C.	NYSRC
North American Electric Reliability Corporation	NERC
North Carolina Independent Cooperatives	
Northeast Power Coordinating Council, Inc.	NPCC
Northeast Utilities Service Company	Northeast Utilities
Northern California Power Agency	NCPA
Ontario Power Generation Inc.	Ontario Power

Commenter	Abbreviation
Joint Western Commenters	Joint Western Commenters
Benton Rural Electric Association	
Big Bend Electric Cooperative	
Blachley-Lane Electric Cooperative	
Central Electric Cooperative	
Central Lincoln People's Utility District	
City of Ellensburg, Washington	
City of Richland, Washington	
Clearwater Power Company	
Consumers Power	
Coos-Curry Electric Cooperative	
Douglas Electric Cooperative	
Eugene Water & Electric Board	
Fall River Rural Electric Cooperative	
Fergus Electric Cooperative, Inc.	
Idaho Falls Power	
Inland Power and Light Company	
Lane Electric Cooperative	
Lincoln Electric Cooperative	
Lost River Electric Cooperative	
Northern Lights	
Northwest Public Power Association	
Northwest Requirements Utilities	
Okanogan Electric Cooperative	
Pacific Northwest Generating Cooperative	
Public Utility District No. 1 of Douglas County, Washington	
Public Utility District No. 1 of Klickitat County, Washington	

Commenter	Abbreviation
Raft River Rural Electric Cooperative	
Salmon River Electric Cooperative	
Tillamook PUD	
Umatilla Electric Cooperative	
Wells Rural Electric Company	
West Oregon Electric Cooperative	
Western Montana Electric Generating and Transmission Cooperative, Inc.	
Portland General Electric Company	PGE
Public Power Council	
Public Utility District No. 1 of Snohomish County, Washington	Snohomish
ReliabilityFirst Corporation	ReliabilityFirst
Southern California Edison Company	SCE
Southern Company Services, Inc.	Southern Company
Southwest Transmission Dependent Utility Group	SWTDUG
State Utility Commissions and Consumer Counsel	
Idaho Public Utilities Commission	
Montana Public Service Commission	
Montana Consumer Counsel	
Oregon Public Utility Commission	
Utah Public Service Commission	
Washington Utilities and Transportation Commission	
Tacoma Power	
Texas Industrial Energy Consumers	TIEC
Transmission Access Policy Study Group	TAPS
Transmission Agency of Northern California	TANC
U.S. Department of the Interior	
Utah Associated Municipal Power Systems	Utah Municipal



Commenter	Abbreviation
Utility Services, Inc.	Utility Services
Virginia Electric and Power Company, d/b/a Dominion Virginia Power	Dominion Power
Western Electricity Coordinating Council	WECC
Wyoming Public Service Commission	WPSC