

125 FERC ¶ 61,295  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

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

North American Electric Reliability Corporation and Docket No. RC09-3-000  
Northeast Power Coordinating Council, Inc.

ORDER DIRECTING THE SUBMISSION OF DATA

(Issued December 18, 2008)

1. In this order, the Commission directs the North American Electric Reliability Corporation (NERC) and Northeast Power Coordinating Council, Inc. (NPCC) to submit to the Commission, within thirty days of the date of this order, a comprehensive list of bulk electric system facilities within the United States portion of the NPCC region.

**Background**

**Order No. 693**

2. On March 16, 2007, in Order No. 693,<sup>1</sup> pursuant to section 215 of the Federal Power Act (FPA),<sup>2</sup> the Commission approved 83 Reliability Standards proposed by the NERC, the Commission-certified Electric Reliability Organization (ERO).<sup>3</sup> In addition, Order No. 693 addressed the applicability of mandatory Reliability Standards to the Bulk-Power System.

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<sup>1</sup> See *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242, *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007) (directing improvements to 56 of the 83 approved Reliability Standards and leaving 24 Reliability Standards as pending until further information is provided).

<sup>2</sup> 16 U.S.C. § 824o (2006).

<sup>3</sup> *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062, *order on reh'g and compliance*, 117 FERC ¶ 61,126 (2006), *appeal pending sub nom. Alcoa Inc. v. FERC*, No. 06-1426 (D.C. Cir.) (certifying NERC as the ERO responsible for the development and enforcement of mandatory Reliability Standards).

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

- (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) and
- (B) electric energy from generating facilities needed to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy.[<sup>4</sup>]

The Commission observed that NERC defines “bulk electric system” as follows:

As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.[<sup>5</sup>]

4. 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>6</sup> Further, the Commission explained that:

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.[<sup>7</sup>]

The Commission directed NERC to submit an informational filing that includes regional definitions of bulk electric system and any regional documents that identify critical facilities to which the Reliability Standards apply (i.e., facilities below 100 kV).

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<sup>4</sup> 16 U.S.C. § 824o(a).

<sup>5</sup> Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 51.

<sup>6</sup> *Id.* P 76.

<sup>7</sup> *Id.* P 77 (footnotes omitted).

### **NERC's June 14, 2007 Filing**

5. In a June 14, 2007 filing, NERC submitted the regional definitions of bulk electric system.<sup>8</sup> NERC represented that “[e]ach Regional Entity utilizes the definition of bulk electric system in the NERC *Glossary*; 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. In addition, the Reliability Standards apply to load shedding and special protection relay facilities below 100 kV, which are monitored by Regional Entities, in compliance with NERC’s Reliability Standards.”<sup>9</sup>

6. In the June 14 Filing, NERC indicated that four Regional Entities, Texas Regional Entity, Florida Reliability Coordinating Council, Midwest Reliability Organization, and SERC Reliability Corporation, use the NERC definition of bulk electric system without modification. Three other Regional Entities, ReliabilityFirst Corporation (ReliabilityFirst), Southwest Power Pool (SPP Regional Entity), and Western Electricity Coordinating Council (WECC), 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.<sup>10</sup>

7. NERC’s June 14 Filing also indicated that NPCC also asserts that it 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, as discussed below.

### **NPCC Definition of Bulk Electric System**

8. In the June 14, 2007 Filing, NERC explained that NPCC identifies elements of the bulk electric system using an impact-based methodology, not a voltage-based

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<sup>8</sup> NERC Informational Filing, Docket No. RM06-16-000 (June 14, 2007) (June 14 Filing).

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

<sup>10</sup> WECC identifies nine supplemental criteria to add more specificity to the NERC definition of bulk electric system, such as “the system element is listed in the definition of a Transfer Path” and “an (N-1) outage of the system element necessitates a reduction in a Transfer Path’s limit on actual power flow.” *Id.* at 13-14.

methodology. Further, as part of its approach to defining the bulk electric system, NPCC includes its own definition of “bulk power system” as follows:

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.

According to NERC, NPCC analyzes all system elements within its footprint regardless of size (voltage) to determine impact based on this definition.

9. NERC’s filing included NPCC’s “*Classification of Bulk Power System Elements*,” which provides further information on the above definition and how it is applied.<sup>11</sup> The introduction to this document explained that each “Area,” i.e., balancing authority, within NPCC maintains and updates lists of bulk power system elements.<sup>12</sup> The methodology is applicable to all voltage levels and no element is automatically included or excluded based on voltage class. Each Area conducts studies that assume power flow conditions utilizing transfers, load, and generation conditions that stress the system in a manner critical to the classification of the bus to be tested.

10. Each Area is responsible for application of the methodology described in *Classification of Bulk Power System Elements* and must maintain a list of bulk power system elements.<sup>13</sup> These lists are compiled by NPCC into the “NPCC Inc. BPS List.” Areas must review and update their lists as necessary at least every three years. Changes to an Area’s list, either adding or removing elements, must be approved by NPCC’s Task Force on System Studies.

### **New York ISO Lists of Bulk Power System Elements**

11. In connection with a June 2007 event in the NPCC region, the Commission first became aware that the New York ISO, which is registered as a balancing authority within NPCC, has developed multiple lists of bulk power system elements, each with significant

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<sup>11</sup> NERC June 14 Filing, Attachment 1 (NPCC Document A-10, *Classification of Bulk Power System Elements* (April 28, 2007)).

<sup>12</sup> NPCC has five “Areas,” New England, New York, Ontario, Quebec and the Maritimes (New Brunswick, Nova Scotia and Prince Edward Island). *See id.* According to the NPCC glossary, each Area operates as a control area (now balancing authority) as defined by NERC. New York Independent System Operator, Inc. (New York ISO) and ISO New England Inc. are the two balancing authorities within the United States portion of NPCC.

<sup>13</sup> *Id.*, section 3.0.

differences. For example, in a May 2006 study, the New York ISO conducted a comprehensive transmission review that includes all facilities 230 kV and above, as well as considerable 100 kV and above facilities, plus all large generating facilities.<sup>14</sup> In 2007, New York ISO developed a list of bulk electric system facilities for the New York State Reliability Council (NYSRC) that includes more facilities than the May 2006 study.<sup>15</sup> The Commission has reason to believe that there may be other lists of bulk electric system, or bulk power system (the term NPCC uses in its methodology), elements as well.<sup>16</sup>

### **Discussion**

12. As described above, it has come to the Commission's attention that there appear 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. There is no indication which, if any, of these lists was submitted to NPCC or approved by NPCC's Task Force on System Studies. Further, the Commission is concerned that the lists developed by the balancing authorities in the United States portion of the NPCC region may not be consistent either with regard to the application of the NPCC impact-based methodology or with NERC's representation that ". . . the Reliability Standards apply to load shedding and special protection relay facilities below 100 kV, which are monitored by Regional Entities, in compliance with NERC's Reliability Standards." While we note that one of the lists appears to be consistent with interpretations of bulk electric system elements in other regional entities,<sup>17</sup> it is not clear whether this list is currently being used by NPCC.

13. Before considering what action to take in response to these concerns, the Commission seeks further information as to how the definition of bulk electric system is

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<sup>14</sup> New York ISO, *2005 Comprehensive Area Transmission Review of the New York State Bulk Power Transmission System (Study Year 2010)* (May 26, 2006).

<sup>15</sup> New York ISO, *2007 Load and Capacity Data* (2007) (annual submission to the NYSRC).

<sup>16</sup> See, e.g., New York ISO *Transmission and Dispatching Operation Manual*, which specifies facilities that the New York ISO considers important to maintaining the reliability of the bulk electric system in New York and are therefore designated for monitoring and control.

<sup>17</sup> See *supra* note 15.

being applied in NPCC.<sup>18</sup> The Commission believes that to best achieve reliability, the applicable NPCC list should be consistent with both the NPCC impact-based methodology and with the interpretations of bulk electric system elements in other regional entities. In order for the Commission to understand the scope and comprehensiveness of the definition of bulk electric system used in the NPCC region, as well as internal consistency across the United States portion of the NPCC region, the Commission directs NERC and NPCC to respond to the following questions within thirty days:

1. Provide NPCC's current list of bulk power system elements within the United States portion of the NPCC region, pursuant to section 3.0 of NPCC's *Classification of Bulk Power System Elements*.
2. Provide all documentation regarding the NPCC Task Force on System Studies' deliberation and approval of the list provided in response to question 1 above.
3. For the United States portion of the NPCC region, identify the following facilities that are not included in NPCC's current list of bulk power system elements:
  - (a) each transmission facility rated at 100 kV and above;
  - (b) each generation unit with a gross nameplate rating of 20 MVA or above that is directly connected to a 100 kV and above transmission facility; and
  - (c) each "load shedding and special protection relay facility," regardless of the facility rating.<sup>19</sup>

For each such facility or unit, identify: (i) the name of the facility; (ii) the balancing authority within which the facility or unit is located; (iii) the owner and operator of the facility or unit; (iv) the facility or unit rating; and (v) whether the facility or unit was included in a previous version of the NPCC list of bulk electric system elements (and identify the previous version of the list).

14. After receipt and analysis of the above information, the Commission will determine what, if any, further appropriate action is warranted.

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<sup>18</sup> See 18 C.F.R. § 39.2(d) (2008) ("the Electric Reliability Organization and each Regional Entity shall provide the Commission such information as is necessary to implement section 215 of the Federal Power Act").

<sup>19</sup> June 14 Filing at 7.

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The Commission orders:

NERC and NPCC are hereby ordered to submit the required data to the Commission within thirty days of the date of this order, as discussed in the body of this order.

By the Commission.

( S E A L )

Kimberly D. Bose,  
Secretary.

Document Content(s)

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