

136 FERC ¶ 61,176  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 40

[Docket No. RM10-29-000; Order No. 753]

Electric Reliability Organization Interpretation of Transmission Operations Reliability  
Standard

(Issued September 15, 2011)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Final Rule.

SUMMARY: Under section 215 of the Federal Power Act (FPA), the Federal Energy Regulatory Commission approves the North American Electric Reliability Corporation's proposed interpretation of Reliability Standard, TOP-001-1, Requirement R8, which pertains to the restoration of real and reactive power during a system emergency.

EFFECTIVE DATE: This rule will become effective [sixty (60) days after publication in the **FEDERAL REGISTER**].

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SUPPLEMENTARY INFORMATION:

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

Electric Reliability Organization Interpretation of  
Transmission Operations Reliability Standard

Docket No. RM10-29-000

ORDER NO. 753

FINAL RULE

(Issued September 15, 2011)

1. Under section 215 of the Federal Power Act (FPA),<sup>1</sup> the Federal Energy Regulatory Commission approves the North American Electric Reliability Corporation's (NERC) proposed interpretation of Requirement R8 in Commission-approved NERC Reliability Standard TOP-001-1 — Reliability Responsibilities and Authorities.

**I. Background**

2. Section 215 of the FPA requires a Commission-certified Electric Reliability Organization (ERO) to develop mandatory and enforceable Reliability Standards, which are subject to Commission review and approval. Approved Reliability Standards are enforced by the ERO, subject to Commission oversight, or by the Commission independently.

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<sup>1</sup> 16 U.S.C. § 824o (2006).

3. Pursuant to section 215 of the FPA, the Commission established a process to select and certify an ERO<sup>2</sup> and, subsequently, certified NERC as the ERO.<sup>3</sup> On March 16, 2007, the Commission issued Order No. 693, approving 83 of the 107 Reliability Standards filed by NERC, including Reliability Standard TOP-001-1.<sup>4</sup>

4. NERC's Rules of Procedure provide that a person that is "directly and materially affected" by Bulk-Power System reliability may request an interpretation of a Reliability Standard.<sup>5</sup> The ERO's "standards process manager" will assemble a team with relevant expertise to address the requested interpretation and also form a ballot pool. NERC's Rules provide that, within 45 days, the team will draft an interpretation of the Reliability Standard, with subsequent balloting. If approved by ballot, the interpretation is appended to the Reliability Standard and filed with the applicable regulatory authority for regulatory approval.

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<sup>2</sup> *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

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

<sup>4</sup> *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).

<sup>5</sup> NERC Rules of Procedure, Appendix 3A, Reliability Standards Development Procedure, Version 6.1, at 27-29 (2010).

**A. Reliability Standard TOP-001-1**

5. Reliability Standard TOP-001-1 (Reliability Responsibilities and Authorities) centers on the responsibilities of balancing authorities and transmission operators during a system emergency. Specifically, the stated purpose of Reliability Standard TOP-001-1 is to ensure reliability entities have clear decision-making authority and capabilities to take appropriate actions or direct the actions of others to return the transmission system to normal conditions during an emergency. Requirement R8 of the standard provides:

During a system emergency, the Balancing Authority and Transmission Operator shall immediately take action to restore the Real and Reactive Power Balance. If the Balancing Authority or Transmission Operator is unable to restore Real and Reactive Power Balance it shall request emergency assistance from the Reliability Coordinator. If corrective action or emergency assistance is not adequate to mitigate the Real and Reactive Power Balance, then the Reliability Coordinator, Balancing Authority, and Transmission Operator shall implement firm load shedding.<sup>6</sup>

**B. NERC Proposed Interpretation**

6. On July 16, 2010, NERC submitted its petition for approval for an interpretation of Requirement R8 in Commission-approved Reliability Standard TOP-001-1. The Petition explains that NERC received a request from Florida Municipal Power Pool (FMPP) seeking an interpretation of Reliability Standard TOP-001-1, Requirement R8. Specifically, FMPP requested clarification on several aspects of Requirement R8. FMPP asked the following:

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<sup>6</sup> Reliability Standard TOP-001-1, Requirement R8.

Balancing real power is not a function of a [Transmission Operator] and balancing reactive power is not a function of a [Balancing Authority]. For Requirement R8 is the Balancing Authority responsibility to immediately take corrective action to restore Real Power Balance and is the [Transmission Operator] responsibility to immediately take corrective action to restore Reactive Power Balance?<sup>7</sup>

7. Consistent with the NERC Rules of Procedure, NERC stated that it assembled a team to respond to the request for interpretation and presented the proposed interpretation to industry ballot, using a process similar to the process it uses for the development of Reliability Standards.<sup>8</sup>

8. In response to FMPP's interpretation request, NERC provided the following:

The answer to both questions is yes. According to the NERC Glossary of Terms Used in Reliability Standards, the Transmission Operator is responsible for the reliability of its "local" transmission system, and operates or directs the operations of the transmission facilities. Similarly, the Balancing Authority is responsible for maintaining load-interchange-generation balance, i.e., real power balance. In the context of this requirement, the Transmission Operator is the functional entity that balances reactive power. Reactive power balancing can be accomplished by issuing instructions to the Balancing Authority or Generator Operators to alter reactive power injection. Based on NERC Reliability Standard BAL-005-1b Requirement R6, the Transmission Operator has no requirement to compute an Area Control Error (ACE) signal or to balance real power. Based on NERC Reliability Standard VAR-001-1 Requirement R8, the Balancing Authority is not required to resolve reactive power balance issues. According to TOP-001-1 \ Requirement R3, the Balancing Authority is only required to comply

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<sup>7</sup> NERC Petition at 5.

<sup>8</sup> NERC Reliability Standards Development Procedure at 27-29.

with Transmission Operator or Reliability Coordinator instructions to change injections of reactive power.<sup>9</sup>

NERC stated that the interpretation was developed and approved by industry stakeholders and approved by the NERC Board of Trustees (Board).

9. The NERC petition explained that the interpretation is consistent with the stated purpose of the Reliability Standard, which is to ensure reliability entities have clear decision-making authority and capabilities to take appropriate actions or direct the actions of others to return the transmission system to normal conditions during an emergency. NERC added that the interpretation clarifies the responsibilities of balancing authorities and transmission operators during a system emergency by referencing the *NERC Glossary of Terms Used in Reliability Standards* as well as other relevant Reliability Standards.<sup>10</sup>

10. On February 14, 2011, NERC made a supplemental filing in response to a Commission staff data request.<sup>11</sup> With regard to whether Requirement R8 obligates a joint response in a system emergency, NERC explained that Requirement R8 does not use the word “joint” or otherwise infer joint responsibility during system emergencies. Rather, NERC responded that the balancing authority and transmission operator have

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<sup>9</sup> *Id.* at 5-6.

<sup>10</sup> *Id.* at 6.

<sup>11</sup> Response of the North American Electric Reliability Corporation to Request for Additional Information Regarding Interpretation to Reliability Standard TOP-001-1, Requirement R8 (NERC Response).

separate responsibilities to restore real and reactive power balance during system emergencies. NERC also stated that the use of “and” between the two entities should not construe communication or coordination. NERC added that the Blackout Report<sup>12</sup> correctly identifies communication and coordination issues as reliability issues and that communication and coordination are addressed in the Communications (COM) Reliability Standards.<sup>13</sup>

## II. Notice of Proposed Rulemaking

11. On April 21, 2011, the Commission issued a Notice of Proposed Rulemaking (NOPR) proposing to approve NERC’s interpretation of Reliability Standard TOP-001-1, Requirement R8.<sup>14</sup> In the NOPR, the Commission stated that it believed that the ERO has presented a reasonable interpretation consistent with the language of the Reliability Standard. In addition, the NOPR noted that a balancing authority and transmission operator each have coordination and communication functions that are necessary for maintaining real and reactive power balance.

12. In response to the NOPR, NERC filed comments supporting the Commission’s proposed approval of the interpretation. No comments were filed opposing the Commission’s proposal to approve NERC’s interpretation.

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<sup>12</sup> *Final Report on the August 14, 2003 Blackout in the United States and Canada* (Blackout Report).

<sup>13</sup> NERC Response at 4-7.

<sup>14</sup> *Electric Reliability Organization Interpretation of Transmission Operations Reliability Standard*, Notice of Proposed Rulemaking, 76 FR 23222 (Apr. 26, 2011), FERC Stats. & Regs. ¶ 32,674 (2011) (NOPR).



### **III. Commission Determination**

13. The Commission adopts the NOPR proposal and approves the interpretation of TOP-001-1, Requirement R8. The Commission finds that NERC's interpretation is just, reasonable, not unduly discriminatory or preferential, and in the public interest.

14. The interpretation supports the stated purpose of the Reliability Standard, i.e., ensuring that reliability entities have clear decision-making authority and capabilities to take appropriate actions or direct the actions of others to return the transmission system to normal conditions during an emergency.<sup>15</sup> The interpretation also clarifies the responsibilities of a balancing authority and transmission operator during a system emergency. Further, the language is consistent with the language of the requirement. Accordingly, the Commission approves the ERO's interpretation of TOP-001-1, Requirement R8.

15. We agree, as discussed in the interpretation, that the balancing authority is responsible for restoring real power balance during a system emergency and the transmission operator is responsible for restoring reactive power balance during a system emergency. However, during a system emergency, communication and coordination between the transmission operator and balancing authority can be essential to restore real and reactive power balance. For example, during an emergency, the balancing authority may rely on the real power output of a generator to fulfill its responsibility, while the

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<sup>15</sup> *Id.* at 6.

transmission operator may expect the same generator unit to reduce real power to generate greater reactive power output.<sup>16</sup>

16. NERC acknowledges the need for such communication and coordination.<sup>17</sup> NERC maintains that this coordination and communication is required through two currently-effective Communication Reliability Standards: (1) COM-001-1.1 – Telecommunications and (2) COM-002-2 – Communication and Coordination.<sup>18</sup>

17. We agree with NERC that the currently effective COM Reliability Standards provide for such communication and coordination. For example, Reliability Standard COM-002-2, Requirement R1 provides that transmission operators, balancing authorities and generator operators must have communication links with one another and must be staffed to address a real-time emergency. Reliability Standard EOP-001-0, Requirements R3, R4.3, and R7 also contain provisions relevant to the need for communication and coordination in emergencies.<sup>19</sup> These provisions require balancing authorities and

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<sup>16</sup> The Blackout Report described such a scenario, explaining that a generator unit tripped because the unit's protection system detected the VAR output, i.e., reactive power, exceeded the unit's capability. Blackout Report at 27. The Blackout Report also explained that no generator units were asked to reduce their real power output to produce more reactive power. *Id.* at 47.

<sup>17</sup> NERC Response at 6-7.

<sup>18</sup> NERC Response at 6-7. NERC also identifies several ongoing Reliability Standards projects that are intended to strengthen the requirements pertaining to communication and coordination between entities.

<sup>19</sup> See NOPR, FERC Stats. & Regs. ¶ 32,674 at P 14. On July 13, 2011, the Commission approved EOP-001-2 Reliability Standard, replacing EOP-001-0 effective July 1, 2013. *Mandatory Reliability Standards for Interconnection Reliability Operating* (continued...)

transmission operators to develop plans to mitigate operating emergencies including coordination among adjacent transmission operators and balancing authorities.

18. Accordingly, for the reasons discussed above, we approve NERC's proposed interpretation of TOP-001-1, Requirement R8.

#### **IV. Information Collection Statement**

19. The Office of Management and Budget (OMB) regulations require that OMB approve certain reporting and recordkeeping requirements (collections of information) imposed by an agency.<sup>20</sup> The information contained here is also subject to review under section 3507(d) of the Paperwork Reduction Act of 1995.<sup>21</sup>

20. As stated above, the Commission approved, in Order No. 693, Reliability Standard TOP-001-1 that is the subject of the current rulemaking. This Final Rule approves the interpretation of the previously approved Reliability Standard, which was developed by NERC as the ERO. The interpretation, as clarified, relates to an existing Reliability Standard, and the Commission does not expect it to affect entities' current reporting burden.<sup>22</sup> Accordingly, we will submit this Final Rule to OMB for informational purposes only.

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*Limits; System Restoration Reliability Standards*, 136 FERC ¶ 61,030 (2011). The applicable Requirements in EOP-001-2 relevant to the need for communication and coordination in emergencies are Requirements R2, R3.3, and R6.

<sup>20</sup> 5 C.F.R § 1320.11.

<sup>21</sup> 44 U.S.C. § 3507(d).

<sup>22</sup> See Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1901-1907.

21. Interested persons may obtain information on the reporting requirements by contacting the following: Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426 [Attention: Ellen Brown, Office of the Executive Director, e-mail: [DataClearance@ferc.gov](mailto:DataClearance@ferc.gov), Phone: (202) 502-8663, fax: (202) 273-0873].

## **V. Environmental Analysis**

22. 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>23</sup> The Commission has categorically excluded certain actions from this requirement as not having a significant effect on the human environment. Included in the exclusion are rules that are clarifying, corrective, or procedural or that do not substantially change the effect of the regulations being amended.<sup>24</sup> The actions proposed herein fall within this categorical exclusion in the Commission's regulations.

## **VI. Regulatory Flexibility Act**

23. The Regulatory Flexibility Act of 1980 (RFA)<sup>25</sup> generally requires a description and analysis of final rules that will have significant economic impact on a substantial number of small entities. The RFA mandates consideration of regulatory alternatives that

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<sup>23</sup> *Regulations Implementing the National Environmental Policy Act of 1969*, Order No. 486, 52 FR 47897 (Dec. 17, 1987), FERC Stats. & Regs. Preambles 1986-1990 ¶ 30,783 (1987).

<sup>24</sup> 18 C.F.R. § 380.4(a)(2)(ii).

<sup>25</sup> 5 U.S.C. § 601-612.

accomplish the stated objectives of a final rule and that minimize any significant economic impact on a substantial number of small entities. The Small Business Administration's (SBA) Office of Size Standards develops the numerical definition of a small business.<sup>26</sup> The SBA has established a size standard for electric utilities, stating that a firm is small if, including its affiliates, it is primarily engaged in the transmission, generation and/or distribution of electric energy for sale and its total electric output for the preceding twelve months did not exceed four million megawatt hours.<sup>27</sup> The RFA is not implicated by this Final Rule because the interpretations discussed herein will not have a significant economic impact on a substantial number of small entities.

24. The Commission approved Reliability Standard TOP-001-1 in 2007 in Order No. 693. The Final Rule in the immediate docket addresses an interpretation of Requirement R8 of previously-approved TOP-001-1. The interpretation clarifies current compliance obligations of balancing authorities and transmission operators and therefore, does not create an additional regulatory impact on small entities.

## **VII. Document Availability**

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

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<sup>26</sup> 13 C.F.R. § 121.101.

<sup>27</sup> 13 C.F.R. § 121.201, Section 22, Utilities, & n.1.

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

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

27. User assistance is available for eLibrary and the FERC's website during normal business hours from FERC Online Support at 202-502-6652 (toll free at 1-866-208-3676) or 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).

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

28. These regulations are effective [insert date 60 days from publication 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 )

Kimberly D. Bose,  
Secretary.