

133 FERC ¶ 61,212
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.

Mandatory Reliability Standards
for the Bulk-Power System

Docket Nos. RM06-16-010
RM06-16-011

ORDER ACCEPTING COMPLIANCE FILING

(Issued December 16, 2010)

1. On October 25, 2010, the North American Electric Reliability Corporation (NERC), the Commission-certified electric reliability organization (ERO), submitted a compliance filing in response to the Commission's May 13, 2010 order directing, *inter alia*, that NERC submit a proposed schedule for developing a frequency response requirement (October 25, 2010 Compliance Filing).¹ In this order, we accept NERC's October 25, 2010 Compliance Filing and its commitment to develop requirements for minimum levels of frequency response needed for Reliable Operation consistent with the Commission's directives in Order No. 693.²

I. Background

2. In Order No. 693, issued in March 2007, the Commission, *inter alia*, approved NERC's Resource and Demand Balancing (BAL) Reliability Standards, including BAL-003-0, which addresses frequency response and bias.³ The Commission approved BAL-

¹ *Mandatory Reliability Standards for the Bulk-Power System*, 130 FERC ¶ 61,218, *order on reh'g*, 131 FERC ¶ 61,136, at P 15 (2010) (May 13, 2010 Order).

² *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242, at P 369-375, *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

³ See http://www.nerc.com/files/BAL-003-0_1b.pdf. The terms Frequency Response and Frequency Bias are defined in the NERC Glossary of Terms Used in Reliability Standards.

[Http://www.nerc.com/docs/standards/rs/Glossary_2009April20.pdf](http://www.nerc.com/docs/standards/rs/Glossary_2009April20.pdf).

003-0, noting that Requirement R5 places a minimum magnitude on frequency bias, and that Requirement R2 identifies that the Frequency Bias be “as close as practical to, or greater than, the Balancing Authority’s [yearly average] Frequency Response.”⁴ The Commission concluded that “the minimum frequency response needed for Reliable Operation should be defined and methods of obtaining the frequency response identified.”⁵ Accordingly, in Order No. 693 the Commission approved Reliability Standard BAL-003-0 as mandatory and enforceable and directed the ERO to develop a modification to BAL-003-0 through the Reliability Standards development process that “defines the necessary amount of Frequency Response needed for Reliable Operation for each balancing authority with methods of obtaining and measuring that the frequency response is achieved.”⁶ The Commission also directed NERC to determine an appropriate periodicity of frequency response surveys necessary to ensure that the requirements of BAL-003-0 are being met.⁷

3. In a March 18, 2010 order,⁸ the Commission established a six month compliance deadline for NERC to submit modifications to Reliability Standard BAL-003-0 that are responsive to the Commission’s directives in Order No. 693. While the Commission noted that NERC had established a project (Project No. 2007-12) to address the BAL-003-0 directive and had initiated a Standard Authorization Request (SAR) to obtain information regarding frequency response, it also noted that almost three years had passed since the issuance of Order No. 693, and that NERC had not proposed modifications to Reliability Standard BAL-003-0 in response to the Commission’s directive.⁹

4. NERC and other entities submitted requests for rehearing and clarification. With regard to the compliance deadline, NERC and other entities contended that the development of a frequency response requirement is a technically complex matter and that the Commission’s directive could not reasonably be met in the allotted six months. Duke Energy Carolinas, LLC recommended that the Commission convene a technical

⁴ See Order No. 693, *Mandatory Reliability Standards for Bulk-Power System*, at P 370-373.

⁵ *Id.* P 372.

⁶ *Id.* P 375.

⁷ *Id.*

⁸ *North American Electric Reliability Corp.*, 130 FERC ¶ 61,218 (2010) (March 18, 2010 Order).

⁹ *Id.* P 2, 17.

conference to develop a greater understanding of frequency response issues and to promote a more collaborative approach among the Commission, NERC, and industry.

5. In the May 13, 2010 Order, the Commission granted rehearing for the limited purpose of further consideration, and directed Commission staff to convene a technical conference to provide an opportunity for a public discussion regarding technical issues pertaining to the development of a frequency response requirement.¹⁰ In addition, the Commission directed NERC to submit, within 30 days after the technical conference, a proposed schedule that includes firm deadlines for completing studies and analyses needed to develop a frequency response requirement, and for submission of a modified Reliability Standard that is responsive to the Commission directives in Order No. 693 pertaining to Reliability Standard BAL-003-0.¹¹ The Commission stated it would provide notice and opportunity to comment on the proposed schedule, as well as other matters discussed at the technical conference.¹²

II. October 25, 2010 Compliance Filing

6. The October 25, 2010 Compliance Filing outlines the technical basis for a new Reliability Standard, including: benchmarking present balancing authority frequency response,¹³ a field trial, monitoring of frequency response in the near term, and a proposed action plan for developing a Reliability Standard that is responsive to the Commission directives in Order No. 693.¹⁴ The filing indicates that NERC would evaluate advances in frequency response performance achieved in the Electric Reliability Council of Texas (ERCOT) Interconnection by setting requirements for generator governor deadbands and droop settings.¹⁵ In addition, non-generator sources of primary frequency control such as demand-side management would be included.

¹⁰ May 13, 2010 Order, 131 FERC ¶ 61,136 at P 14.

¹¹ *Id.* P 15.

¹² The Commission deferred the six month compliance deadline set forth in the March 18, 2010 Order pending further order by the Commission.

¹³ NERC would benchmark the present level of frequency response provided by each balancing authority for events in late 2008 and 2009. NERC is gathering this data through the use of a voluntary Alert Recommendations that NERC issued on September 14, 2010 and September 9, 2010, respectively.

¹⁴ NERC's proposed action plan and timeline is provided as an Attachment to this order.

¹⁵ ERCOT achieves half of its primary frequency control through frequency activated demand-side management known as Load acting as a Resource. ERCOT has

(continued...)

7. Specifically, NERC states that the frequency response drafting team will propose to define a new term, “Frequency Response Obligation,” as “the minimum Frequency Response obligation assigned to the Balancing Authority by the ERO in accordance with Attachment A of the proposed BAL-003-1 Reliability Standard as a share of the total aggregate Frequency Response needed for the reliable operation of an Interconnection.”¹⁶ NERC states that the frequency response drafting team will propose that each Interconnection initially be assigned a frequency response obligation that is a discretely administered determination of the necessary frequency response to prevent under frequency load shedding.¹⁷ This requirement would be proportionally assigned to each balancing authority, and evaluated for reliability during a field trial period.¹⁸ In addition to the discretely administered determination, NERC states that the drafting team is also evaluating a risk-based determination that can be based on a probability function.¹⁹

8. The proposed action plan includes estimated timelines for completing the studies and analyses needed to develop a frequency response requirement. According to the proposed action plan, NERC will submit a revised BAL-003-1 Reliability Standard with the Commission by May 2012.²⁰

9. NERC indicates that currently-reported data, such as monthly reports on frequency and area control error (ACE) performance and quarterly reports on the disturbance control Standard, “should provide adequate monitoring of Frequency Response in the near-term.”²¹

also adopted an approach to calculate the necessary frequency response for reliable operation and currently sets the frequency bias equal to the frequency response, which is approximately one percent of ERCOT’s peak load. *See* ERCOT Operating Guide Section 2: System Operations at P 2-36 found at <http://www.ercot.com/mktrules/guides/operating/current>; Order No. 693 at P 371; Reliability Standard BAL-003-0 Requirement R2; and NERC 2010 CPS2 Bounds Report at P 7 found at http://www.nerc.com/docs/oc/rs/CPS2bounds_2010v9a.pdf.

¹⁶ NERC filing at 11.

¹⁷ *Id.* at 11-12.

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ NERC filing at 4.

²¹ *Id.* at 9.

III. Notice and Responsive Pleadings

10. Notice of the filing was published in the *Federal Register*, with interventions and protests due on or before November 15, 2010.²² A timely motion to intervene was filed by Electric Power Supply Association. No entities submitted comments in response to NERC's compliance filing.

IV. Discussion

A. Procedural Matters

11. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2010), the timely, unopposed motion to intervene serves to make Electric Power Supply Association a party to this proceeding.

B. Commission Determination

12. The Commission accepts the October 25, 2010 Compliance Filing. The proposed action plan provides that NERC will file a revised BAL-003-1 Reliability Standard with the Commission by May 2012. In meeting this filing timeline, the proposed action plan includes an initial draft Reliability Standard by March 2011, formal comment period and ballot by December 2011, and a recirculation ballot by March 2012. NERC's proposed action plan demonstrates a commitment to develop requirements for minimum levels of frequency response needed for Reliable Operation consistent with the Commission's directives in Order No. 693.

13. In response to NERC's proposal to develop a methodology for determining a frequency response obligation, the Commission reaffirms that Reliability Standards must be consistent with the factors enumerated in Order No. 672. Specifically, requirements must be clear and unambiguous to allow registered entities to know what is required of them in advance of compliance, and that there may not be mechanisms outside of the Standards that change requirements without ERO and Commission approval.²³ We accept NERC's commitment to ensure any proposed Reliability Standard will meet the criteria outlined in Order No. 672 to determine that a Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest.

²² 75 Fed. Reg. 67,960 (2010).

²³ *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, P 325 and 327 (2006).

14. In both the October 25, 2010 Compliance Filing and its comments following the frequency response technical conference, NERC acknowledges a decline in the average Interconnection frequency response.²⁴ The Commission's Order No. 693 directives regarding BAL-003-0 were grounded in the concern that balancing authorities maintain the necessary amount and sources of frequency response needed at all times for Reliable Operation. NERC states that it will rely on currently-collected information such as frequency and ACE performance and disturbance control Standard data to monitor frequency response in the near-term. We do not rule on this proposed process here, but encourage NERC to consider more direct means to further enhance monitoring of frequency response in the interim,²⁵ and we accept NERC's commitment to ensure Reliable Operation during the development of a frequency response requirement.

The Commission orders:

NERC's October 25, 2010 Compliance Filing is hereby accepted, as discussed in the body of this order.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

²⁴ See NERC filing at 10 and "Comments of the North American Electric Reliability Corporation Following September 23 Frequency Response Technical Conference" submitted October 14, 2010 at 2.

²⁵ ERCOT currently assesses the frequency response of each individual generator and the total interconnection following each major event.

Attachment – Project 2007-12 Frequency Response Action Plan Timeline

Action	Description	Estimated Timeline
Preparation for Field Trial	Collection and validation of data for use in developing frequency response values for Balancing Authorities to implement prior to field trial commencing.	October 25, 2010 thru May 3, 2011
Field Trial	Field trial of draft BAL-003-1 — Frequency Response and Bias Reliability Standard	May 3, 2011 thru February 16, 2012
Develop Initial Draft of Standard	In parallel with the preparation for field trial, develop the initial draft of the proposed BAL-003-1 — Frequency Response and Bias Reliability Standard for industry comment.	October 25, 2010 thru March 2, 2011
Formal Comment Period and Ballot	<p>Develop reply comments to the initial posting of the draft BAL-003-1 — Frequency Response and Bias Reliability Standard for industry comment and modify the proposed standard consistent with the comments received.</p> <p>Monitor the field trial results and modify the draft standard as needed consistent with the results of the field trial.</p> <p>Observe field trial results for at least five successive months before commencing the initial ballot of the standard. Since the field trial is estimated to commence on or about May 3, 2011 the earliest the 45-day comment period and parallel ballot can commence is on or about October 3, 2011.</p>	March 3, 2011 thru December 12, 2011
Recirculation Ballot	Develop reply comments to all comments received and then initiate the recirculation ballot. Because the initial ballot is expected to end in the middle of December 2011, much of the work for replying to comments will take place in January and February of 2012 before the recirculation ballot is initiated and completed on or about March 1, 2012.	December 13, 2011 thru March 1, 2012
NERC BOT Approval	Prepare material and present to the NERC Board of Trustees for adoption and approval to file with all applicable regulatory authorities.	On or before May 2012 NERC Board of Trustees Meeting
Regulatory Filings	File proposed standard and associated material with applicable regulatory authorities for approval.	Complete by May 2012