

Supporting Statement
FERC-725R, Mandatory Reliability Standards: Reliability Standard BAL-003-1
Notice of Proposed Rulemaking in RM13-11-000
Frequency Response and Frequency Bias Setting Reliability Standard

In Docket RM13-11 the Commission proposes to approve Reliability Standard BAL-003-1, submitted by the North American Electric Reliability Corporation (NERC), the Commission-certified Electric Reliability Organization (ERO). The proposed Reliability Standard includes requirements pertaining to the measurement and provision of frequency response.¹ NERC's proposal addresses a gap in reliability as well as directives on the matter from Order No. 693.²

The existing information collection requirements in the proposed Reliability Standard (BAL-003-1) are approved by OMB under FERC-725A (OMB Control No.1902-0244).

We are submitting this proposed rule (Notice of Proposed Rulemaking or NOPR) under a new collection number and control number because of other Commission proceedings also affecting the FERC-725A collection. This new collection (FERC-725R) will only contain the information collection burden that is new in the proposed rule in RM13-11.

1. CIRCUMSTANCES THAT MAKE THE COLLECTION OF INFORMATION NECESSARY

On August 8, 2005, The Electricity Modernization Act of 2005, which is Title XII of the Energy Policy Act of 2005 (EPAAct 2005), was enacted into law.³ EPAAct 2005 added a new section 215 to the Federal Power Act (FPA), which requires a Commission-certified Electric Reliability Organization (ERO) to develop mandatory and enforceable Reliability Standards, which are subject to Commission review and approval. Once approved, the Reliability Standards may be enforced by the ERO, subject to Commission oversight.

On March 16, 2007, in Order No. 693, pursuant to section 215(d) of the FPA, the Commission approved 83 of 107 proposed Reliability Standards, six of the eight proposed regional differences, and the North American Electric Reliability Corporation (NERC) *Glossary of Terms Used in Reliability Standards* (NERC Glossary), including currently-effective BAL-003-0. In addition, pursuant to section 215(d)(5) of the FPA, the Commission directed NERC, among other things, to develop modifications to BAL-003-0 to address certain issues identified by the Commission. Specifically, the Commission directed NERC to:

¹ NERC defines "frequency response" in the NERC Glossary of Terms Used in Reliability Standards (Glossary) as follows:

Equipment: The ability of a system or elements of the system to react or respond to a change in system frequency. System: The sum of the change in demand, plus the change in generation, divided by the change in frequency, expressed in megawatts per 0.1 Hertz (MW/0.1 Hz).

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

³ The Energy Policy Act of 2005, Pub. L. No 109-58, Title XII, Subtitle A, 119 Stat. 594, 941 (2005), codified at 16 U.S.C. 824o (2000).

develop a modification to BAL-003-0 through the Reliability Standards development process that: (1) includes Levels of Non-Compliance; (2) determines the appropriate periodicity of frequency response surveys necessary to ensure that Requirement R2 and other requirements of the Reliability Standard are being met, and to modify Measure M1 based on that determination and (3) defines the necessary amount of Frequency Response needed for Reliable Operation for each balancing authority with methods of obtaining and measuring that the frequency response is achieved.⁴

On March 18, 2010, the Commission established a six month compliance deadline for NERC to submit modifications to Reliability Standard BAL-003-0 responsive to the Commission's directives in Order No. 693.⁵ NERC requested rehearing and clarification. On rehearing for further consideration, the Commission 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.⁶ The Commission also directed NERC to submit 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 BAL-003-0 Reliability Standard responsive to the Commission directives in Order No. 693.

On October 25, 2010, NERC submitted an action plan and estimated timelines for completing studies and analyses needed to develop a frequency response requirement. NERC indicated that it would complete the revised Reliability Standard by May 2012.⁷ On March 30, 2012, NERC submitted a motion for an extension of time to submit modifications, and on May 4, 2012, the Commission granted the request through May 2013.⁸ NERC submitted its petition requesting approval of proposed Reliability Standard BAL-003-1 on March 29, 2013.

Frequency response is a measure of an Interconnection's ability to stabilize frequency immediately following the sudden loss of generation or load, and is a critical component of the reliable operation of the Bulk-Power System, particularly during disturbances and recoveries. Frequency response is predominately provided by the automatic and autonomous actions of turbine-governors with some response being provided by changes in demand due to changes in frequency.

2. HOW, BY WHOM, AND FOR WHAT PURPOSE THE INFORMATION IS TO BE USED AND THE CONSEQUENCES OF NOT COLLECTING THE INFORMATION

Proposed Reliability Standard BAL-003-1 applies to entities registered with NERC as Balancing Authorities and Frequency Response Sharing Groups.⁹ NERC states that the purpose of the

4 Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 375.

5 *Mandatory Reliability Standards for the Bulk-Power System*, 130 FERC ¶ 61,218 (2010).

6 *Mandatory Reliability Standards for the Bulk-Power System*, 131 FERC ¶ 61,136, at P 15 (2010).

7 The Commission accepted NERC's proposed action plan on December 16, 2010. *Mandatory Reliability Standards for the Bulk-Power System*, 133 FERC ¶ 61,212 (2010).

8 *Mandatory Reliability Standards for the Bulk-Power System*, 139 FERC ¶ 61,097 (2012).

9 NERC proposes to define Frequency Response Sharing Group as "[a] group whose members consist of two or more Balancing Authorities that collectively maintain, allocate, and supply operating resources required to jointly meet the sum of the Frequency Response Obligations of its members." NERC Petition at 13. The proposed

proposed Reliability Standard is to ensure that “a Balancing Authority’s Frequency Bias Setting is accurately calculated to match its actual Frequency Response” and also “to provide consistent methods for measuring Frequency Response and determining the Frequency Bias Setting.”¹⁰ The proposed Reliability Standard consists of four requirements. The proposed Reliability Standard establishes a minimum Frequency Response Obligation¹¹ for each Balancing Authority, provides a uniform calculation of frequency response, establishes Frequency Bias Settings that establish values closer to actual Balancing Authority frequency response, and encourages coordinated automatic generation control (AGC) operation.¹² These matters are not addressed in any currently-effective Reliability Standard. Because the proposed Reliability Standard addresses a gap in reliability, as well as certain directives from Order No. 693, we propose to approve the proposed Reliability Standard BAL-003-1.

The only substantive change to the information collection requirements in the NOPR is for Balancing Authorities to report annually to NERC certain measures and settings as described more fully below.

The proposed Reliability Standard requires the collection of certain information to establish the Interconnection Frequency Response Obligation and the Frequency Bias Setting for each Balancing Authority. Each Balancing Authority reports its previous year Frequency Response Measure and Frequency Bias Setting to NERC, and revised Frequency Bias Settings are based on data from events the Balancing Authorities report on the proposed FRS Form 1.¹³ The information provided on the FRS Form 1 is based on events which qualify for analyses,¹⁴ and NERC states that it will identify between 20 to 35 events in each Interconnection for calculating the Frequency Response Measure and Frequency Bias Setting and the Frequency Response Measure.¹⁵

Reliability Standard allows Balancing Authorities to cooperatively form Frequency Response Sharing Groups as a means to jointly meet the obligations of the standard. *Id.*

10 NERC Petition at 15. *See also* proposed BAL-003-1, Purpose Statement:

To require sufficient Frequency Response from the Balancing Authority (BA) to maintain Interconnection Frequency within predefined bounds by arresting frequency deviations and supporting frequency until the frequency is restored to its scheduled value. To provide consistent methods for measuring Frequency Response and determining the Frequency Bias Setting.

11 NERC proposes to define Frequency Response Obligation as “[t]he Balancing Authority’s share of the required Frequency Response needed for the reliable operation of an Interconnection. This will be calculated as MW/0.1Hz.”

12 NERC proposes to revise the definition of Frequency Bias Setting as “[a] number, either fixed or variable, usually expressed in MW/0.1 Hz, included in a Balancing Authority’s Area Control Error equation to account for the Balancing Authority’s inverse Frequency Response contribution to the Interconnection, and discourage response withdrawal through secondary control systems.”

13 FRS [Frequency Response Survey] Form 1 and FRS Form 2 are submitted by Balancing Authorities to NERC who reviews them; FRS Forms 1 and 2 are not submitted to FERC.

14 NERC states that it will provide quarterly posting of candidate events to assist the Balancing Authorities with compliance, and lessen the burden of the annual submission of FRS Form 1 data. NERC Petition, Exh. C at 3-4.

15 *Id.* at 1. The Frequency Response Initiative Report states that between 20 and 25 events are necessary for statistical analysis. *Id.*, Exh. F at 72.

Failure to maintain frequency can disrupt the operation of equipment and initiate disconnection of power plant equipment to prevent them from being damaged, which could lead to wide-spread blackouts.

3. DESCRIBE ANY CONSIDERATION OF THE USE OF IMPROVED INFORMATION TECHNOLOGY TO REDUCE THE BURDEN AND TECHNICAL OR LEGAL OBSTACLES TO REDUCING BURDEN

The use of current or improved technology is not covered in Reliability Standards, and is therefore left to the discretion of each reporting entity.

4. DESCRIBE EFFORTS TO IDENTIFY DUPLICATION AND SHOW SPECIFICALLY WHY ANY SIMILAR INFORMATION ALREADY AVAILABLE CANNOT BE USED OR MODIFIED FOR USE FOR THE PURPOSE(S) DESCRIBED IN INSTRUCTION NO. 2

The information collection requirements are unique to this reliability standard and to this information collection. The Commission does not know of any duplication in the requirements.

5. METHODS USED TO MINIMIZE THE BURDEN IN COLLECTION OF INFORMATION INVOLVING SMALL ENTITIES

The NERC registry includes 132 individual Balancing Authorities. Comparison of the NERC Compliance Registry with data submitted to the Energy Information Administration on Form EIA-861 indicates that, of these entities, 15 may qualify as small entities.¹⁶

The Commission estimates the annual regulatory burden for compliance with the proposed Reliability Standard to be \$13,560 per Balancing Authority. This estimate for all Balancing Authorities was established using 28 events per year (more fully described in #12), but smaller entities may have fewer events which qualify for analysis,¹⁷ and the costs for these smaller entities may be reduced. Further, while the proposed Reliability Standard establishes a Balancing Authority's Frequency Response Obligation, because Balancing Authorities are currently providing frequency response, we do not anticipate additional compliance costs.

In general, small entities may reduce their burden by taking part in a joint registration organization or a coordinated functional registration. These options allow an entity to share its compliance burden with other entities.

¹⁶ The RFA definition of "small entity" refers to the definition provided in the Small Business Act (SBA), which defines a "small business concern" as a business that is independently owned and operated and that is not dominant in its field of operation. See 15 U.S.C. 632 (2006). According to the Small Business Administration, an electric utility is defined as "small" if, including its affiliates, it is primarily engaged in the generation, transmission, and/or distribution of electric energy for sale and its total electric output for the preceding fiscal year did not exceed 4 million megawatt hours.

¹⁷ The Procedures establish a minimum of 20 events for analysis, and a process for identifying when fewer than 20 events are available for analysis.

6. CONSEQUENCE TO FEDERAL PROGRAM IF COLLECTION WERE CONDUCTED LESS FREQUENTLY

If this standard and the associated information collection requirements were performed less frequently, NERC would not have the information necessary to appropriately calculate frequency response settings and measurements on the Bulk Electric System

7. EXPLAIN ANY SPECIAL CIRCUMSTANCES RELATING TO THE INFORMATION COLLECTION

There is one special circumstances as described in 5 CFR 1320.5(d)(2) related to this information collection.

The data retention requirement in the Reliability Standard BAL-003-1 says:

The Balancing Authority shall retain data or evidence to show compliance with Requirements R1, R2, R3 and R4, Measures M1, M2, M3 and M4 for the current year plus the previous three calendar years unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

This is the language adopted by the standards drafted team and approved by industry representatives during the balloting process. As such, this is the data retention period deemed necessary for the reliability purposes contained in this standard.

8. DESCRIBE EFFORTS TO CONSULT OUTSIDE THE AGENCY: SUMMARIZE PUBLIC COMMENTS AND THE AGENCY'S RESPONSE

The ERO process to establish Reliability Standards is a collaborative process with the ERO, Regional Entities and other stakeholders developing and reviewing drafts, and providing comments, with the final proposed standard submitted to the FERC for review and approval.¹⁸ In addition, each FERC rulemaking (both proposed and final rules) is published in the Federal Register, thereby providing public utilities and licensees, state commissions, Federal agencies, and other interested parties an opportunity to submit data, views, comments or suggestions concerning the proposed collection of data. The proposed rule was published in the Federal Register on July 29, 2013 (78 FR 45479).

9. EXPLAIN ANY PAYMENT OR GIFTS TO RESPONDENTS

The Commission does not make payments or provide gifts for respondents related to this collection.

¹⁸ Details of the current ERO Reliability Standard processes are available on the NERC website at http://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/Appendix_3A_StandardProcessesManual_20130626.pdf.

10. DESCRIBE ANY ASSURANCE OF CONFIDENTIALITY PROVIDED TO RESPONDENTS

There are no specific assurances of confidentiality mentioned to respondents.

11. PROVIDE ADDITIONAL JUSTIFICATION FOR ANY QUESTIONS OF A SENSITIVE NATURE

This collection does not include any questions of a sensitive nature.

12. ESTIMATED BURDEN OF COLLECTION OF INFORMATION

The proposed Reliability Standard requires the collection of certain information to establish the Interconnection Frequency Response Obligation and the Frequency Bias Setting for each Balancing Authority. Each Balancing Authority reports its previous year Frequency Response Measure and Frequency Bias Setting to NERC, and revised Frequency Bias Settings are based on data from events the Balancing Authorities report on the proposed FRS Form 1 and FRS Form 2. Applicable entities file the FRS Form 1 and FRS Form 2 on an annual basis, as specified in Attachment 1 to Reliability Standard BAL-003-1. The information provided on the FRS Form 1, supported by the FRS Form 2, is based on events which qualify for analyses,¹⁹ and NERC states that it will identify between 20 to 35 events in each Interconnection for calculating the Frequency Response Measure and Frequency Bias Setting and the Frequency Response Measure.²⁰

Allotting eight hours for Balancing Authorities to compile the information on candidate events,²¹ multiplied by 28 events per Balancing Authority per year yields 224 hours per year per Balancing Authority as the regulatory burden for compliance.²² As of May 31, 2013, there are 132 registered Balancing Authorities.²³ Accordingly, the Commission estimates the annual regulatory burden for compliance with the proposed Reliability Standard to be \$13,440 per Balancing Authority,²⁴ with a total annual cost for all Balancing Authorities to be \$1,774,080.

¹⁹ NERC states that it will provide quarterly posting of candidate events to assist the Balancing Authorities with compliance, and lessen the burden of the annual submission of FRS Form 1 data. NERC Petition, Exh. C at 3-4.

²⁰ *Id.* at 1. The Frequency Response Initiative Report states that between 20 and 25 events are necessary for statistical analysis. *Id.*, Exh. F at 72.

²¹ The information is automatically generated from computer data bases. However, time is allotted to compile, verify, and review the information.

²² Assuming an average of between 20 and 35 events per year.

²³ NERC Compliance Registry List, May 30, 2013.

²⁴ The estimated hourly loaded cost (salary plus benefits) for an engineer is assumed to be \$60/hour, based on salaries as reported by the Bureau of Labor Statistics (BLS) (http://bls.gov/oes/current/naics2_22.htm). Loaded costs are BLS rates divided by 0.703 and rounded to the nearest dollar (<http://www.bls.gov/news.release/ecec.nr0.htm>).

BAL-003-1 (Frequency Response and Frequency Bias Setting)	Number of Balancing Authority Respondents (1)	Number of Responses per Respondent (2)	Average Burden Hours Per Response (3)	Total Annual Burden Hours (1)x(2)x(3)	Estimated Total Annual Cost (\$) (Total hours x \$60)
Annual Reporting	132	28	8	29,568	\$1,774,080
Data Retention ²⁵	132	1	2	264	\$15,840
TOTAL				29,832	\$1,789,920

13. ESTIMATE OF THE TOTAL ANNUAL COST BURDEN TO RESPONDENTS

There is no start-up or other non-labor hour cost associated with this final rule. We assume that the information collection requirements associated with this final rule can be completed by entities using existing hardware and software.

14. ESTIMATED ANNUALIZED COST TO FEDERAL GOVERNMENT

The Regional Entities and NERC do most of the data processing, monitoring and compliance work for Reliability Standards. Any involvement by the Commission is covered under the FERC-725 collection (1902-0225) and is not part of this request or package.

The Commission does incur the costs associated with obtaining OMB clearance under the Paperwork Reduction Act for this Collection. FERC estimates \$2,250 as the annual cost for this effort.²⁶

15. REASONS FOR CHANGES IN BURDEN INCLUDING THE NEED FOR ANY INCREASE

The change in burden is due to a new annual reporting requirement for Balancing Authorities. The change in burden is necessary in order to meet the reliability purposes of the proposed standards.

The following table shows burden inventory for the new FERC-725R because of the proposed rule.

FERC-725R	Total Request	Previously Approved	Change due to	Change Due to Agency
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²⁵ The “1” response per respondent for data retention is simply a placeholder. We assume that the “response” for data retention is part of the responses associated with the annual reporting.

²⁶ This is based on an estimate of work done by the Information Clearance team and other FERC staff as well as a small non-labor cost related to publishing material in the Federal Register.

			Adjustment in Estimate	Discretion
Annual Number of Responses	3,696	-	-	3,696
Annual Time Burden (Hr)	29,832	-	-	29,832
Annual Cost Burden (\$)	-	-	-	-

16. TIME SCHEDULE FOR PUBLICATION OF DATA

There are no data publications as part of this collection

17. DISPLAY OF EXPIRATION DATE

It is not appropriate to display the expiration date because the information is not collected on a preformatted form or in any format that would allow for such a display.

18. EXCEPTIONS TO THE CERTIFICATION STATEMENT

The Commission does not use statistical methods for this collection. Therefore, the Commission does not certify that the collection uses statistical methods.