

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

**Balancing Authority Control, Inadvertent )  
Interchange, and Facility Interconnection )  
Reliability Standards )**

**Docket No. RM16-13-000**

**COMMENTS OF THE  
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION  
IN RESPONSE TO NOTICE OF PROPOSED RULEMAKING**

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The North American Electric Reliability Corporation (“NERC”) hereby provides comments on the Federal Energy Regulatory Commission (“Commission”) Notice of Proposed Rulemaking (“NOPR”) to approve NERC’s petition on April 20, 2016, as supplemented June 14, 2016, for two proposed Reliability Standards and retirement of one Reliability Standard.<sup>1</sup> Specifically, NERC requested Commission approval of (i) proposed Reliability Standards **BAL-005-1** – Balancing Authority Control and **FAC-001-3** – Facility Interconnection Requirements (including three related definitions);<sup>2</sup> (ii) retirement of Reliability Standard **BAL-006-2** – Inadvertent Interchange (with one requirement proposed for consolidation with BAL-005-1); and (iii) associated retirements, implementation plans, Violation Risk Factors (“VRFs”), and Violation Severity Levels (“VSLs”) (together, “NERC’s Proposals”). The NOPR proposes to approve NERC’s Proposals, while requesting additional information regarding retirement of currently-effective Requirement R15 within BAL-005-0.2b (“Requirement R15”). The NOPR

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<sup>1</sup> Notice of Proposed Rulemaking, *Balancing Authority Control, Inadvertent Interchange, and Facility Interconnection Reliability Standards*, 156 FERC ¶ 61,210 (2016) (“NOPR”). *See also*, Petition of the North American Electric Reliability Corporation for Approval of Proposed Reliability Standards BAL-005-1 and FAC-001-3, Docket No. RM16-13-000 (filed Apr. 20, 2016) (“Petition”); *and* Supplemental Information for Petition of the North American Electric Reliability Corporation for Approval of Proposed Reliability Standards BAL-005-1 and FAC-001-3, Docket No. RM16-13-000 (filed June 24, 2016) (“Supplement”).

<sup>2</sup> These three definitions are: Automatic Generation Control, Pseudo-Tie, and Balancing Authority. NERC also originally proposed six additional new or revised definitions; however, these were withdrawn, refiled in a separate docket, and approved in June 2016. *See*, Notice of Withdrawal of the North American Electric Reliability Corporation, Docket No. RM16-13-000 (filed June 2, 2016).

states that depending on comments submitted in response to the NOPR, the Commission may direct NERC to restore the substance of Requirement R15 in Reliability Standards.

NERC supports the Commission's proposed approval of NERC's Proposals and provides additional information regarding Requirement R15. These clarifications address the NOPR questions regarding Requirement R15 and underscore that retirement of Requirement R15 would enhance reliability by (i) replacing a backup power supply requirement with broader performance requirements; and (ii) eliminating redundant obligations. Such retirement would be consistent with general recommendations by the 2013 Independent Expert Review Project ("IERP"). Accordingly, NERC respectfully requests that the Commission issue a final rule in this proceeding that approves NERC's Proposals as set forth in the Petition and Supplement, as just, reasonable, not unduly discriminatory or preferential, and in the public interest.

## **I. COMMUNICATIONS**

Notices and communications with respect to these comments may be addressed to:<sup>3</sup>

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## **II. COMMENTS**

On September 22, 2016, the Commission proposed to approve NERC's Proposals to consolidate, streamline, and enhance frequency control related Reliability Standards.

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<sup>3</sup> Persons to be included on the Commission's service list are identified by an asterisk. NERC respectfully requests a waiver of Rule 203 of the Commission's regulations, 18 C.F.R. § 385.203, to allow the inclusion of more than two persons on the service list in this proceeding.

Specifically, the NOPR proposed to approve Reliability Standards BAL-005-1 and FAC-001-3 (including their related definitions) and retirement of BAL-006-2 (including consolidation of one requirement within BAL-005-1), while seeking additional information regarding retirement of Requirement R15. For the reasons discussed in these comments and stated in the Petition and Supplement, NERC supports the NOPR.

NERC also appreciates this opportunity to provide further explanation supporting retirement of Requirement R15. These comments clarify: (i) how broader performance obligations under proposed BAL-005-1 subsume the objectives of Requirement R15; and (ii) how Balancing Authority (“BA”), Reliability Coordinator (“RC”), and Transmission Operator (“TOP”) obligations in Reliability Standard EOP-008-1 currently require that these responsible entities (1) have Operating Plans in place that account for any necessary backup power resources, and (2) test those resources. Thus, proposed BAL-005-1 and existing EOP-008-1 are broader and duplicative of Requirement R15, supporting retirement of the requirement consistent with IERP general recommendations. These clarifications also underscore the manner in which NERC’s Proposals would enhance reliability by applying a consolidated, broader, and clearer performance-based approach to frequency control related Reliability Standards. As a result, NERC requests that the Commission issue a final rule in this proceeding that approves NERC’s Proposals.

**A. NERC Supports Approval of NERC's Proposals.**

The Commission should approve NERC's Petition as proposed in the NOPR because NERC's Proposals would enhance reliability and improve calculation of Reporting Area Control Error ("ACE").<sup>4</sup> As stated in the NOPR, NERC's Proposals,

[W]ill enhance reliability as compared to currently-effective Reliability Standards BAL-005-0.2b and FAC-001-2, because the proposed Reliability Standards clarify and consolidate existing requirements related to frequency control. In addition, proposed Reliability Standard BAL-005-1 supports more accurate and comprehensive calculation of Reporting ACE by requiring timely reporting of an inability to calculate Reporting ACE (Requirement R2) and by requiring minimum levels of availability and accuracy for each balancing authority's system for calculating Reporting ACE (Requirement R5).<sup>5</sup>

Reporting ACE serves as a key input in frequency related Reliability Standards by indicating the state of an entity's contribution to reliability. Therefore, as detailed in NERC's Petition and Supplement, NERC's Proposals will enhance reliability by consolidating and streamlining frequency control related standards, under more clearly stated obligations that would improve calculation of Reporting ACE.<sup>6</sup> As discussed in the Petition, NERC's Proposals also address all remaining directives related to BAL-005 and BAL-006.<sup>7</sup> These revisions would substantially improve existing frequency control requirements and support stronger frequency control performance.

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<sup>4</sup> Reporting ACE represents a Balancing Authority Area's ("BAA") ACE measured in megawatts ("MW") as the difference between the BAAs Actual and Scheduled Net Interchange, plus its Frequency Bias Setting obligation and meter error corrections.

<sup>5</sup> NOPR, at P 23.

<sup>6</sup> See, NOPR, at PP 8-20 (summarizing the Petition and Supplement).

<sup>7</sup> See, NOPR, at PP 11, 13 (summarizing the Petition). See also, BAL-001-2 addressing Regulating Reserve, consistent with Order No. 693, at P 396.

**B. Requirement R15 Should Be Retired Because It Focuses On One Factor Contributing to BA Performance, Whereas NERC Proposes a Broader Performance-Based Approach in Reliability Standard BAL-005-1 at Requirements R3 and R5.**

Requirement R15, which focuses on merely one element contributing to BA control center performance and ignores others, should be retired in favor of the performance-based approach reflected in NERC's Proposal. NERC proposes a comprehensive performance-based approach that encompasses necessary backup power supplies, as well as any other element necessary for Control Center performance. The NOPR recognized that proposed:

Reliability Standard BAL-005-1, combined with the requirements of Reliability Standard EOP-008-1, represents a more performance based approach to maintaining functionality for reliable operation of the interconnected bulk electric system, including ensuring the continued operation of AGC and certain data recording equipment during the loss of normal power supply, compared to the more specific approach of Requirement R15 in Reliability Standard BAL-005-0.2b.<sup>8</sup>

In this section, NERC provides further explanation on how retiring Requirement R15 is an integral part of NERC's focus on actual performance of equipment and systems necessary for calculating Reporting ACE, instead of one element contributing to performance.

In particular, proposed BAL-005-1 includes two important performance obligations that subsume Requirement R15. First, BAL-005-1, Requirement R3 would require BAs to use frequency metering equipment for calculation of Reporting ACE that is available a minimum of 99.95% annually, with minimum accuracy of 0.001 Hz. Second, BAL-005-1, Requirement R5 would require that each BA system used to calculate Reporting ACE be available a minimum of 99.5% annually. Each of these requirements implicitly require that BAs ensure the existence of all components (including power) necessary to provide virtually constant performance of BA

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<sup>8</sup> NOPR, at P 30.

equipment and systems necessary to support calculation of Reporting ACE. The proposed standard provides no exceptions to these performance obligations. In contrast, existing Requirement R15 only focuses on one component of BA operations that contributes to performance – power supply.<sup>9</sup> Power supply is undoubtedly important, however, proposed BAL-005-1 would implement performance obligations that also capture other critical performance elements, such as data acquisition and communications, frequency metering, and ACE calculation systems.

Moreover, in response to the NOPR’s request for additional information (NOPR Question 5), NERC clarifies that the frequency metering performance obligation under proposed Requirement R3 will ensure virtual “continuous operation of AGC and vital data recording equipment recording equipment during loss of the normal power supply,” per Requirement R15.<sup>10</sup> In addition, NERC clarifies that retiring Requirement R15 would not materially affect responsible entity burdens.<sup>11</sup> Rather, retirement would benefit reliability by avoiding gaps that could arise if responsible entities mistakenly believe that they might achieve minimum operational performance by merely maintaining adequate back-up power supply. Retaining Requirement R15 might inadvertently create confusion regarding the scope of Requirements R3 and R5 of BAL-005-1. Under proposed BAL-005-1, BAs must ensure the existence of all components necessary to meet the stringent proposed performance obligations in the standard. As a result, retiring Requirement R15 would support reliability by avoiding an overly narrow focus on merely one element that contributes to performance. The Commission should approve

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<sup>9</sup> As discussed in Section III.C. below, in addition to proposed Requirements R3 and R5 of BAL-005-1, Reliability Standard EOP-008-1 includes BA, RC, and TOP requirements that require the existence and testing of Operating Plans that address any necessary backup power supply. *See infra*, Section III.C; *cf.* NOPR, at P 32.

<sup>10</sup> *Cf.* NOPR, at P 33, Question 5. NOPR Questions refer to the numbered Questions raised in the NOPR, at P 33. NERC also responds to questions raised in the NOPR, at P 32.

<sup>11</sup> NOPR, at P 32.

NERC's holistic performance-based approach to frequency control standards that encompasses all components that a BA needs in place to ensure its equipment and systems are available to calculate Reporting ACE.

**C. Requirement R15 Should Also Be Retired As Redundant with Broader Obligations in Reliability Standard EOP-008-1, Requirements R1 and R7.**

The NOPR requests additional information regarding the relationship between Requirement R15 and Reliability Standard EOP-008-1 (NOPR Questions 1-4 and 6).<sup>12</sup> The Commission also seeks explanation why:

[H]istorically, there is no parallel to Requirement R15 for reliability coordinators and transmission operators, and whether any reason exists to distinguish between balancing authorities and other entities, such as reliability coordinators and transmission operators, that may operate a control center or critical facility with respect to the need for backup power supply and testing at such locations.<sup>13</sup>

In response to the NOPR and its questions, NERC clarifies in this section the manner in which EOP-008-1 sets forth BA, RC, and TOP requirements that are broader and clearer than those in Requirement R15.

Requirement R15 should be retired as redundant with broader BA, RC, and TOP obligations stated in EOP-008-1. Specifically, Reliability Standard EOP-008-1 includes two requirements that duplicate and exceed the objectives of Requirement R15: Requirements R1 and R7. EOP-008-1, at Requirement R1 requires BAs, RCs, and TOPs to have Operating Plans for backup functionality that include (among other things): (i) the location and method for providing backup functionality; and (ii) a description of elements required to support backup functionality, including power sources and data communications. Per the EOP-008-1 VSLs, an entity would violate the standard if its Operating Plan fails to describe power sources required to

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<sup>12</sup> NOPR, at PP 32-33 (including Questions 1-4 and 6).

<sup>13</sup> NOPR, at P 32. *See also, id.* at P 33, Questions 1 and 3.

support backup functionality. Thus, in response to the NOPR (Question 1), NERC confirms that BAs, RCs, and TOPs must address power sources to comply with EOP-008-1, although it may be possible that backup power supply is not always necessary to support backup functionality.<sup>14</sup> For example, entities may monitor control center functionality through wireless hand-held devices, such as laptop computers, thereby avoiding the need for backup power supply to maintain visibility and functionality. NERC's Proposal focuses on performance in an environment with ever-changing technology, rather than focus on one method that responsible entities may use to support performance.

Further, in response to the NOPR's questions (Questions 2-4) regarding the benefits, burdens, and practices associated with backup power supply and its location, NERC clarifies that Requirement R1 in EOP-008-1 places emphasis on backup *functionality* wherever necessary to support reliability while primary control center functionality is lost. Power resources necessary to support backup functionality might exist at the control center or other locations critical to the calculation of Reporting ACE (*i.e.*, "other critical locations" under Requirement R15).<sup>15</sup> This allows BAs, RCs, and TOPs flexibility to determine the best location and method for backup functionality, if these responsible entities address minimum elements (such as power sources and data communications) stated in EOP-008-1. Therefore, in response to the Commission's request for clarification (NOPR Question 6), NERC confirms that BA, RC, and TOP backup functionality obligations under Requirement R1 in EOP-008-1 include the obligation to address operation of vital equipment necessary for the collection of data to calculate Reporting ACE if

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<sup>14</sup> NOPR, at P 33 Question 1.

<sup>15</sup> See, NOPR, at P 33, Questions 2-4.

frequency metering equipment does not meet the minimum performance requirements under proposed Requirement R3 of BAL-005-1.<sup>16</sup>

In addition to EOP-008-1, Requirement R1 discussed above, Requirement R7 of the standard requires BAs, RCs, and TOPs to annually test the Operating Plan and demonstrate (i) the transition time between simulated loss of primary control center functionality and implementation of backup functionality and (ii) backup functionality a minimum of two hours. This testing requirement is duplicative of the obligation in Requirement R15 to test backup power supplies. Requirement R7 in EOP-008-1 is also clearer and more robust than Requirement R15 by (i) applying the testing requirement to RCs and TOPs (in addition to BAs covered under Requirement R15); (ii) articulating an annual testing obligation (in lieu of the vague periodic testing obligation stated in Requirement R15); and (iii) articulating what responsible entities must demonstrate through the course of testing (whereas Requirement R15 is silent on this issue).

Retiring Requirement R15 would also clarify potential confusion regarding whether BAs, RCs, and TOPs are responsible for ensuring backup functionality upon loss of the primary control center. Requirement R15 does not apply to RCs and TOPs. However, as reflected above, Reliability Standard EOP-008-1 requires BAs, RCs, and TOPs to maintain and test Operating Plans that address all elements (including power sources) needed to support backup functionality upon loss of primary control center functionality (regardless of the location and method of implementation for providing backup functionality). Therefore, while BAL-005 has

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<sup>16</sup> NOPR, at P 32, Question 6.

not historically included RC and TOP obligations parallel to BA obligations under Requirement R15, EOP-008-1 imposes equivalent and broader obligations on RCs and TOPs.<sup>17</sup>

As demonstrated above, EOP-008-1 broadly addresses backup functionality upon loss of the primary control center (whether that functionality is provided at the primary control center or some other location identified in the Operating Plan) and all elements needed for that backup functionality (including power supply).<sup>18</sup> As a result, Requirements R1 and R7 within EOP-008-1 are broader and clearer than Requirement R15, by requiring BAs, RCs, and TOPs to have in place and test Operating Plans that address all elements (including any power sources) necessary for backup functionality.

**D. Retiring Requirement R15 Would Be Consistent with General Independent Expert Review Project Recommendations.**

The NOPR states that the IERP did not recommend retiring Requirement R15 and that the requirement thereby fell within the IERP report's list of "retained Future Enforceable requirements."<sup>19</sup> However, the IERP did not expressly state that NERC should retain Requirement R15 in Reliability Standards or provide any rationale in favor of retaining Requirement R15. Moreover, after the panel's review of hundreds of requirements over a compressed time frame, the IERP report made a general recommendation that, "[a]s standards are revised, do not include requirements that do not mitigate risks to reliability, do not support a

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<sup>17</sup> Cf., NOPR, at P 32. RCs and TOPs, in addition to BAs, should be responsible for ensuring backup functionality upon loss of primary control center functionality, through provision for any necessary power source or other elements required to provide that backup functionality as stated in EOP-008-1.

<sup>18</sup> Cf., NOPR, at P 32, Questions 1-3.

<sup>19</sup> NOPR, at P 31 (citing the report at pp. 1 and 26).

reliability principle, or meet Paragraph 81 criteria....”<sup>20</sup> Paragraph 81 criteria include examining whether requirements are redundant with those in other Reliability Standards.<sup>21</sup>

The proposal to retire Requirement R15 is consistent with the IERP’s general recommendation regarding elimination of requirements within Paragraph 81 criteria. Per the IERP’s general recommendation, the standard drafting team examined whether Requirement R15 fell within the Paragraph 81 criteria and determined that the requirement was appropriate for retirement as redundant with other obligations. The standard drafting team reached this conclusion after comparing Requirement R15 to (i) proposed Requirements R3 and R5 of Reliability Standard BAL-005-1 (which did not exist when the IERP panel was considering Requirement R15) (*see supra*, Section II.B); and (ii) EOP-008-1 (effective a month after the IERP report) (*see supra*, Section II.C).

As discussed in the Petition, Supplement, and these comments, Requirement R15 is redundant of broader and clearer performance-based, obligations in proposed BAL-005-1 and existing EOP-008-1. Retiring Requirement R15 would replace the prior narrow focus on BA obligations regarding backup power supply with an approach that emphasizes consistent performance of equipment and systems necessary for calculation of Reporting ACE as stated in proposed BAL-005-1. Retirement would also clarify that under EOP-008-1, RCs and TOPs, in

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<sup>20</sup> Report, at p. 17.

<sup>21</sup> Notice of Proposed Rulemaking, *Electric Reliability Organization Proposal to Retire Requirements in Reliability Standards*, 143 FERC ¶ 61,251, at P 8 (2013) (“(1) Criterion A: an overarching criteria designed to determine that there is no reliability gap created by the proposed retirement; (2) Criterion B: consists of seven separate identifying criteria designed to recognize requirements appropriate for retirement (administrative; data collection/data retention; documentation; reporting; periodic updates; commercial or business practice; and redundant); and (3) Criterion C: consists of seven separate questions designed to assist...an informed decision whether requirements are appropriate to propose for retirement.”). *See also*, *Electric Reliability Organization Proposal to Retire Requirements in Reliability Standards*, Order No. 788, 145 FERC ¶ 61,147, at P 18 (2013) (stating “the Commission, “concluded that the requirements identified by NERC for retirement satisfy[ied] the expectations set forth in the March 2012 Order; namely, the requirements proposed for retirement either: (1) provide little protection for Bulk-Power System reliability or (2) are redundant with other aspects of the Reliability Standards.”).

addition to BAs, are responsible for ensuring backup functionality (including power supply necessary for any backup functionality) upon loss of the primary control center. As a result, retiring Requirement R15 would be just, reasonable, in the public interest, and consistent with general recommendations under the IERP.

### **III. CONCLUSION**

Wherefore, for the reasons stated above, the Commission should issue a final rule in this proceeding approving NERC's Proposals for (i) Reliability Standards BAL-005-1 and FAC-001-3 (including the three related definitions for Automatic Generation Control, Pseudo-Tie, and Balancing Authority); (ii) retirement of Reliability Standard BAL-006-2; and (iii) the associated implementation plans, retirements, VRFs, and VSLs, as just, reasonable, not unduly discriminatory or preferential, and in the public interest.

Respectfully submitted,

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Date: November 28, 2016

**CERTIFICATE OF SERVICE**

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service lists compiled by the Secretary in Docket No. RM16-13-000.

Dated at Washington, DC this 28<sup>th</sup> day of November, 2016.

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