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

**Frequency Response and Frequency Bias            )     Docket No. RM13-11-000**  
**Setting Reliability Standard                         )     )**

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

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September 27, 2013

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IN RESPONSE TO NOTICE OF PROPOSED RULEMAKING**

The North American Electric Reliability Corporation (“NERC”)<sup>1</sup> hereby provides these comments in response to the Federal Energy Regulatory Commission’s (“FERC” or the “Commission”) July 18, 2013, Notice of Proposed Rulemaking (“NOPR”)<sup>2</sup> proposing to approve Reliability Standard BAL-003-1, Frequency Response and Frequency Bias Setting.<sup>3</sup> The proposed Reliability Standard defines the necessary amount of Frequency Response needed for reliable operations for each Balancing Authority within an Interconnection and addresses a gap in reliability.<sup>4</sup>

**I.     Executive Summary**

As the Commission notes, Frequency Response is a “fundamental measure of the reliability and robustness of the Bulk-Power System.”<sup>5</sup> NERC supports the Commission’s proposal to approve Reliability Standard BAL-003-1, although NERC clarifies that two of the

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<sup>1</sup> The Federal Energy Regulatory Commission certified NERC as the electric reliability organization (“ERO”) in its order issued on July 20, 2006, in Docket No. RR06-1-000. *North American Electric Reliability Corporation*, 116 FERC ¶ 61,062 (2006).

<sup>2</sup> *Frequency Response and Frequency Bias Setting Reliability Standard*, Notice of Proposed Rulemaking, 144 FERC ¶ 61,057 (2013).

<sup>3</sup> Unless otherwise designated, all capitalized terms shall have the meaning set forth in the Glossary of Terms Used in NERC Reliability Standards, available here: [http://www.nerc.com/files/Glossary\\_of\\_Terms.pdf](http://www.nerc.com/files/Glossary_of_Terms.pdf).

<sup>4</sup> The Commission states that “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.” NOPR at P 2. NERC respectfully clarifies that this statement is not true with respect to all Interconnections.

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

Commission's proposed directives regarding (1) the use of linear regression in determining the Frequency Response Measure, and (2) premature withdrawal of Frequency Response, require further technical development and are therefore premature at this time.

In these comments, NERC explains why the standard drafting team determined that the median is the best aggregation technique at this time and how this issue will be monitored by NERC and the Frequency Working Group during the annual review process. NERC also explains how premature withdrawal of Frequency Response is addressed within the proposed Reliability Standard and how this issue will be monitored on a going-forward basis. Additionally, NERC provides information regarding the under-frequency load shedding setting used in the Eastern Interconnection and commits to submitting three reports and an informational filing regarding concerns expressed in the NOPR.<sup>6</sup>

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<sup>6</sup> NERC commits to submitting a compliance filing that analyzes the implications of the Pacific Northwest Remedial Action Scheme or any other Remedial Action Scheme which involves intentional tripping of greater than 2,400 MW of generation, and whether such a contingency would provide a more accurate basis for the determination of the Western Interconnection default Interconnection Frequency Response Obligation as proposed in the NOPR. *See* NOPR at P 32. NERC commits to submitting a study of light-load scenarios. *See* NOPR at P 41. Such reports/informational filings may be combined where practicable.

## **II. Notices and Communications**

Notices and communications with respect to this filing may be addressed to the following:<sup>7</sup>

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## **III. Background**

Provided below is a procedural background section and a technical background section that gives a brief overview of the components of Frequency Response and Frequency Bias.

### **A. Procedural Background**

On March 29, 2013, NERC submitted a petition (“NERC Petition”) for approval of proposed Reliability Standard BAL-003-1 and four new or modified definitions for inclusion in the NERC Glossary. On July 18, 2013, the Commission issued a NOPR proposing to approve Reliability Standard BAL-003-1, Frequency Response and Frequency Bias Setting.

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<sup>7</sup> Persons to be included on the Commission’s service list are indicated with an asterisk. NERC requests waiver of 18 C.F.R. § 385.203(b) to permit the inclusion of more than two people on the service list.

## **B. Technical Background**

Frequency Response is provided in three stages: primary frequency control, also known as Frequency Response in the context of the BAL-003-1 Reliability Standard, secondary frequency control, and tertiary frequency control.

- Frequency Response: Primary Frequency Control
  - Primary frequency control involves the autonomous, automatic, and rapid action of a generator, or other resource, to change its output (within seconds) to rapidly dampen large changes in frequency. The ability of a power system to withstand a sudden loss of generation or load depends on the presence and adequacy of resources capable of providing rapid incremental power changes to counterbalance the disturbance and arrest a frequency deviation.
- Frequency Response: Secondary and Tertiary Frequency Control
  - Secondary frequency control, which includes automatic generation control (“AGC”), is produced from either manual or automated dispatch from a centralized control system. It is intended to balance generation, interchange and demand by managing the output of available resources within minutes as opposed to primary Frequency Response, which manages response within seconds.
  - Tertiary frequency control encompasses actions taken to get resources in place to handle current and future changes in load or contingencies. Reserve deployment and restoration of reserves used in secondary frequency control actions following a disturbance are the essence of tertiary frequency control. Tertiary control adjusts the loading of resources through operator dispatch and occurs in the range of minutes to hours after a frequency excursion.
- Frequency Bias
  - Frequency Bias is an input used in the calculation of a Balancing Authority’s area control error (“ACE”) to account for the power changes associated with primary Frequency Response.
  - Frequency Bias Setting is a secondary control setting of the AGC system, not a primary control parameter, and changes in the Frequency Bias Setting of a Balancing Authority do not change the primary Frequency Response. The Frequency Bias Setting is used in AGC to prevent withdrawal of generator primary control action following a disturbance as long as frequency is off its nominal value.

#### IV. Comments

##### A. **The Commission’s Proposed Directive to Develop a Modification to the Methodology for Determining the Frequency Response Measure is Premature**

The standard drafting team evaluated different approaches for averaging individual event observations to compute a technically sound estimate of Frequency Response Measure, including the median and linear regression analysis. Proposed Reliability Standard BAL-003-1 currently utilizes the median. As the Commission noted in the NOPR, “NERC has provided adequate rationale for using the median to determine the required Frequency Response Measure. NERC explains that application of the median is supported by the analyses performed to date.”<sup>8</sup> Despite this determination, the Commission proposes to direct NERC to develop a modification to apply “a more appropriate methodology for determining the required Frequency Response Measure.”<sup>9</sup>

Importantly, the Commission mischaracterizes NERC’s statement in its petition regarding linear regression. The Commission states in the NOPR that “NERC acknowledges in both its petition and Frequency Response Initiative Report, the use of linear regression is a superior method to determine the required Frequency Response Measure.”<sup>10</sup> In fact, NERC **did not** state that linear regression is a superior method; NERC stated that “*When compared with the mean linear regression shows superior performance with respect to the elimination of noise...*” The concept of “noise” is only one component of the methodology; further, NERC was comparing the mean and linear regression, not the median.<sup>11</sup> Finally, NERC explicitly stated that “Based on

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<sup>8</sup> NOPR at P 26.

<sup>9</sup> NOPR at P 27.

<sup>10</sup> NOPR at P 27.

<sup>11</sup> NERC stated:

When compared with the mean, linear regression shows superior performance with respect to the elimination of noise because the measured data is weighted by the size of the frequency change associated with the event. [FN 34] Since the noise is independent from frequency change, the greater weighting on larger events provides a superior technique for reducing the effect of noise on the results. The standard drafting team acknowledges that linear regression should be re-evaluated for use in the BAL-003 Reliability Standard once more experience is gained with data collected.[FN 35]

the analyses performed thus far, the standard drafting team believes that the median’s superior resiliency to this type of data quality problem makes it *the best aggregation technique at this time.*”<sup>12</sup> For this reason, the Commission’s determination in the NOPR that “based on the record in this docket, it appears that the linear regression method is superior to the median when determining the Frequency Response Measure” is in error.<sup>13</sup>

NERC and the Resources Subcommittee Frequency Working Group (a division of the NERC Operating Committee) (“Frequency Working Group”) have committed to evaluating the use of linear regression during an annual review process.<sup>14</sup> As noted in Exhibit G to the NERC Petition, NERC and the Frequency Working Group have set forth a process for identification of candidate frequency events and an annual review of the calculations. NERC and the Frequency Working Group will include an update of the linear regression analysis during this annual review process. The standard drafting team acknowledged that linear regression should be re-evaluated for use in the BAL-003 Reliability Standard once more experience is gained with data collected, however such a change should only be made with adequate support. The Commission’s proposed directive is therefore premature and unsupported, for as the Commission noted, NERC provided adequate rationale for using the median.

The Commission should refrain from issuing a directive based only on supposition that a particular statistical method *might* be preferable. Pursuant to Section 215(d)(5) of the Federal Power Act, the Commission has the authority to direct any future necessary modifications to the

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[FN 34 The term “noise” refers to factors that can influence data and produce outliers such as concurrent operating phenomena (discussed in the Background Document, **Exhibit D**), transient tie line flows for nearby contingencies, data acquisition time skew in tie line data measurements and time skew and data compression issues.]

[FN 35 As noted in **Exhibit G**, NERC and the Frequency Response Working Group will include an update of the linear regression analysis from the Frequency Response Initiative Report during the annual review process (described in Recommendation 14).]

<sup>12</sup> NERC Petition at 17-18 (emphasis added).

<sup>13</sup> NOPR at P 27.

<sup>14</sup> NERC Petition at n.35.

BAL-003 Reliability Standard. For these reasons, NERC respectfully requests that the Commission refrain from issuing a directive at this time to alter the methodology for determining the Frequency Response Measure. Where NERC has provided sufficient technical justification with respect to the technical content of a proposed Reliability Standard, the Commission should afford this determination due weight.

**B. The Issue of Premature Withdrawal is Addressed Within the Proposed BAL-003-1 Reliability Standard and a Directive is Unnecessary**

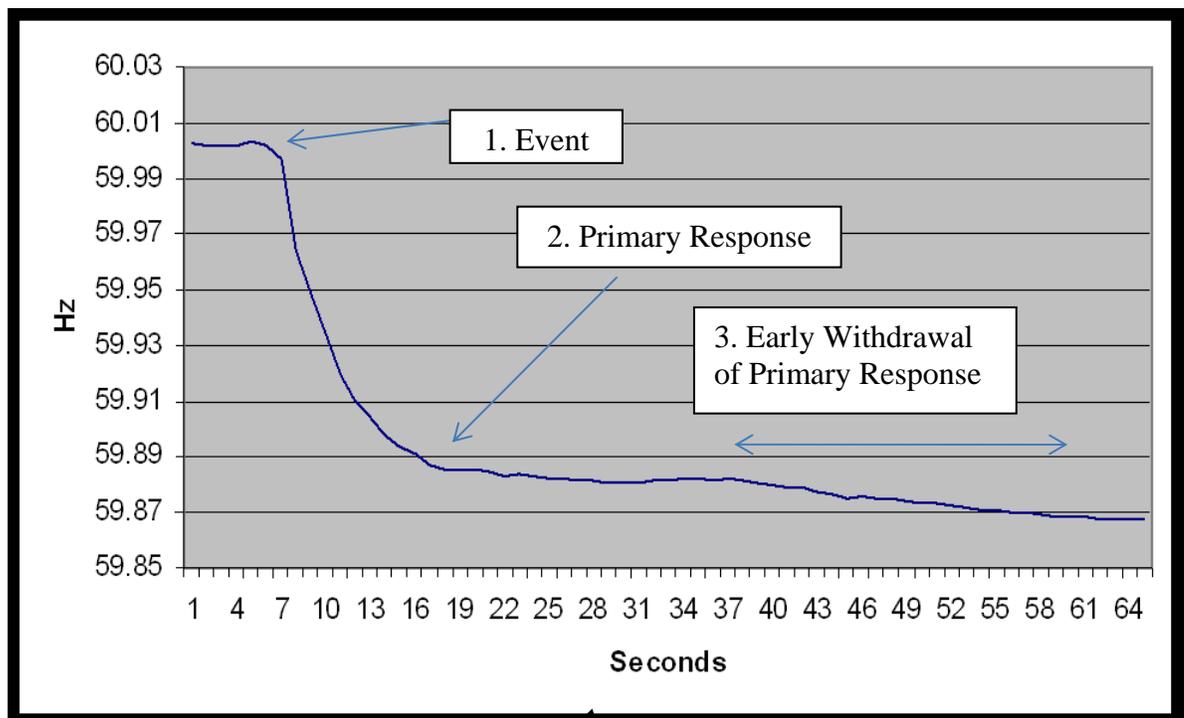
The Commission proposes to “direct that NERC develop a modification to BAL-003-1 to address the concern of premature withdrawal of [F]requency [R]esponse prior to the activation of secondary frequency response.”<sup>15</sup> The proposed directive is inopportune in several respects: (1) the issue of premature withdrawal of Frequency Response is addressed in Form 1 of the proposed Reliability Standard and experience with the actual implementation of the proposed Reliability Standard is necessary in order to determine the threshold question of whether premature withdrawal is an issue that requires revisions to the proposed Reliability Standard and if necessary, to define the scope and parameters of the potential issue; (2) the Commission is exploring whether action is necessary to coordinate the requirements of the proposed Reliability Standard with tariffs and market rules subject to the Commission’s jurisdiction and such actions could directly impact the issue of premature withdrawal; and (3) the issue of premature withdrawal could potentially be addressed via other mechanisms rather than a revision to the proposed Reliability Standard. Finally, NERC commits to monitoring the issue of premature withdrawal on a going-forward basis and will submit an informational filing two years after Requirement R1 of proposed Reliability Standard BAL-003-1 becomes effective.

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<sup>15</sup> NOPR at P 38.

1. Premature Withdrawal is Addressed in Form 1 of the Proposed Reliability Standard

Following the sudden loss of generation, the automatic and immediate increase in power output by resources providing primary frequency control seeks to quickly arrest and stabilize the frequency of the Interconnection, usually within 30 seconds or less. AGC typically provides most of its secondary Frequency Response to return frequency to the scheduled value in time frames longer than one minute after the loss of generation. If a significant amount of primary Frequency Response is withdrawn before the secondary Frequency Response is activated, a further drop in Frequency Response will occur. The Commission illustrated this drop in frequency in the following diagram in the NOPR:<sup>16</sup>



As the standard drafting team noted, the issue of premature withdrawal of Frequency Response is a potential concern. However, the standard drafting team accounted for this issue in

<sup>16</sup> NOPR at P 35. Note this diagram was originally included in the NERC Petition, Exhibit F at 35, fig 21, but was modified by the Commission in the NOPR for illustration purposes.

the calculation of the B-value averaging period within the Frequency Response Measure.<sup>17</sup> As explained in Exhibit D to the NERC Petition:

The team recognized that there would be more AGC response in the 20 to 52 second period, but the team also recognized that the 20 to 52 second period would provide a better measure of squelched response from outer loop control action. The 20 to 52 second period was selected because it would indicate squelched response from outer-loop control and *provide incentive to reduce response withdrawal*.<sup>18</sup>

The effect of this 20 to 52 second interval is that if there is withdrawal during that period, the metric will have a lower value, which will then lower an entity's median score thereby impacting compliance with Requirement R1 of proposed Reliability Standard BAL-003-1.<sup>19</sup> As demonstrated in the diagram below, the standard drafting team has accounted for an interval of time (20 to 52 seconds) that precedes the interval identified by the Commission (approximately 38 to 60 seconds) and is ten seconds longer in overall duration.

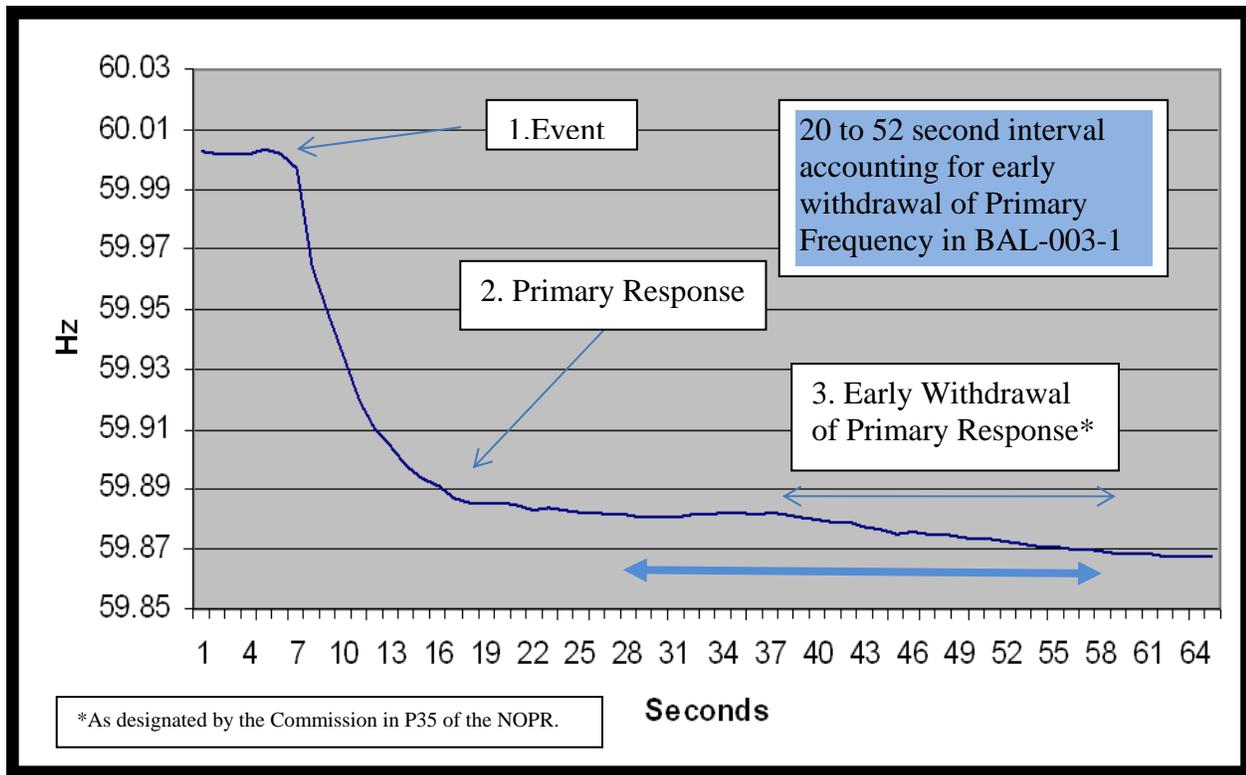
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<sup>17</sup> The Frequency Response Measure is the median of all the Frequency Response observations reported annually by Balancing Authorities or Frequency Response Sharing Groups for frequency events specified by the ERO.

<sup>18</sup> Background document at p. 13 (emphasis added).

<sup>19</sup> Requirement 1 of proposed Reliability Standard BAL-003-1 provides:

**R1.** Each Frequency Response Sharing Group (FRSG) or Balancing Authority that is not a member of a FRSG shall achieve an annual Frequency Response Measure (FRM) (as calculated and reported in accordance with Attachment A) that is equal to or more negative than its Frequency Response Obligation (FRO) to ensure that sufficient Frequency Response is provided by each FRSG or BA that is not a member of a FRSG to maintain Interconnection Frequency Response equal to or more negative than the Interconnection Frequency Response Obligation. [*Risk Factor: Medium*][*Time Horizon: Real-time Operations*]



An additional modification to the proposed BAL-003-1 Reliability Standard to address the issue of premature withdrawal of Frequency Response *may* be necessary. However, this modification should be supported by an appropriate technical justification – and experience with the proposed Reliability Standard is a necessary first-step.

2. The Issue of Premature Withdrawal May be Impacted by Other Commission Actions and Can be Addressed Via Other Mechanisms

The Commission issued a Notice of Request for Comments regarding market-related issues related to the proposed BAL-003-1 Reliability Standard (“Notice”). The Commission is seeking to determine “whether potential future actions are necessary under sections 205, 206 and/or 215(d)(5) of the Federal Power Act to coordinate the requirements of the proposed

Reliability Standard with tariffs and market rules subject to the Commission’s jurisdiction.”<sup>20</sup>

Any such future actions could have a significant impact on Frequency Response and on the issue of premature withdrawal. For example, the construct of a tariff or market solution could influence the AGC cycles, thereby influencing the secondary response characteristics, which could impact withdrawals.

Fundamentally, a tariff or market solution could potentially alter behavior thereby addressing the early withdrawal of primary Frequency Response that would otherwise allow time for secondary Frequency Response to prevent further decline in frequency. There is a direct relationship between this proceeding and the proposed Notice, and until the Notice proceeding is resolved, a directive is premature.

NERC notes that the proposed BAL-003-1 Reliability Standard applies to Balancing Authorities and Frequency Response Sharing Groups whereas the issue of withdrawal applies to generators and therefore it could be addressed via alternative mechanisms, including other Reliability Standards or guidelines.<sup>21</sup> Furthermore, there are emerging technologies that can and will affect withdrawal, including energy storage devices. For these reasons, a Commission directive requiring a specific solution, *i.e.*, a modification to the BAL-003-1 Reliability Standard, is too prescriptive in scope.

The flexibility to solve the issue of premature withdrawal is consistent with the role of NERC as the electric reliability organization pursuant to Section 215 of the Federal Power Act. For these reasons, NERC respectfully requests the Commission reconsider its proposal to issue a directive addressing the premature withdrawal of Frequency Response, for as the Commission

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<sup>20</sup> Notice at P 2.

<sup>21</sup> For example, this issue could be addressed in revisions to Reliability Standard MOD-27, which is currently in development.

noted, Frequency Response is a “highly technical matter”<sup>22</sup> and on such matters, the experience and technical expertise of NERC and the industry should be afforded due weight.

3. NERC Will Evaluate the Issue of Premature Withdrawal on a Going-Forward Basis

As the Commission notes, the Frequency Response Initiative Report recommends measuring and tracking Frequency Response sustainability trends. The Frequency Response Initiative Report also recommends that “NERC should include guidance on methods to reduce or eliminate the effects of primary Frequency Response withdrawal by outer-loop unit of plant control systems.” Consistent with the recommendations in the Frequency Response Initiative Report, NERC commits to evaluating whether a modification to the proposed BAL-003-1 Reliability Standard is necessary in order to address premature withdrawal and will submit an informational filing to the Commission two years after Requirement R1 of proposed Reliability Standard BAL-003-1 becomes effective.<sup>23</sup>

**C. The Proposed Values for the Prevailing UFLS First Step in the Eastern Interconnection are Adequately Supported by Technical Considerations**

The Interconnection Frequency Response Obligation for each Interconnection is a function of the resource contingency criteria and the maximum change in frequency. The maximum change in frequency is calculated by adjusting the starting frequency for each Interconnection by the “prevailing UFLS first step,” i.e., under-frequency load shedding for the Interconnection as adjusted by specific information on the frequency deviations for the observed events which make up the data set used to calculate the Frequency Response Measure.

Attachment A of proposed Reliability Standard BAL-003-1 (“Attachment A”) identifies 59.5 Hz as the prevailing under-frequency load shedding first step for the Eastern Interconnection.

Attachment A notes that this set point is a compromise value set midway between the stable

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<sup>22</sup> NOPR at P 5.

<sup>23</sup> Such a commitment is offered in lieu of a Commission directive on this subject.

frequency minimum established in PRC-006-1 (59.3 Hz) and the local protection under-frequency load shedding setting of 59.7 Hz used in Florida and Manitoba. In the NOPR, the Commission requests support for the statement that that the prevailing first-step value of 59.5 Hz in the calculation of the Interconnection Frequency Response Obligation imposes no greater risk of under-frequency load shedding operation in the Florida Reliability Coordinating Council (“FRCC”) for an external resources loss than for an internal FRCC event.<sup>24</sup>

The Frequency Response Initiative Report of October 2012 notes that:

[t]he highest UFLS setpoint in the Eastern Interconnection is 59.7 Hz in FRCC, while the prevalent highest setpoint in the rest of that Interconnection is 59.5 Hz. The FRCC 59.7 Hz first UFLS step is based on internal stability concerns and preventing the Florida peninsula from separation from the rest of the Interconnection. The FRCC concluded that the [Interconnection Frequency Response Obligation] starting point of 59.5 Hz for the Eastern Interconnection is acceptable in that it imposes no greater risk of UFLS operation for an interconnection resource loss event than for an internal FRCC event.<sup>25</sup>

FRCC’s 59.7 Hz setting is designed to arrest dynamic transients for system events occurring on the Florida peninsula to avoid separation from the rest of the Eastern Interconnection. Further analysis by NERC showed that the under-frequency load shedding settings on the Florida peninsula are not susceptible to even very large resource losses within the main body of the Eastern Interconnection. Using the “generic” dynamics case available, a follow-on analysis was performed by NERC staff to determine the general order of magnitude of a frequency event that could be sustained by the Eastern Interconnection without violating the 59.7 Hz first step under-frequency load shedding in FRCC. A simulation was run that tripped about 8,500 MW of generation in the southeast United States (north of Florida). The simulation

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<sup>24</sup> NOPR at PP 29-30.

<sup>25</sup> NERC Petition, Exhibit F, Frequency Response Initiative Report at p. 52.

showed that the lowest frequency would be about 59.76 Hz in southern Florida.<sup>26</sup> The initial nadir of 59.78 Hz in southern Florida is lower than the nadir in northern Florida due to the wave properties of the disturbance. Because the simulation was conducted with nearly twice the 4,500 MW resource loss used to determine the Interconnection Frequency Response Obligation for the Eastern Interconnection, it is prudent to conclude that the smaller resource loss could not generate a transient that would trip the FRCC 59.7 Hz under-frequency load shedding. For these reasons, the proposed first-step value of 59.5 Hz is adequately supported by technical considerations.

#### **D. NERC Will Submit a Report on Frequency Response Obligation**

The Commission proposes to direct NERC to submit a report 15 months after implementation of BAL-003-1 that provides an analysis of the availability of resources for each Balancing Authority to meet its Frequency Response Obligation during the first year of implementation.<sup>27</sup> NERC clarifies below several issues with respect to this proposed directive including the effective date of BAL-003-1 and the role of Frequency Response Sharing Groups.

The Requirements of proposed BAL-003-1 have different proposed effective dates -- Requirements R2, R3 and R4 are proposed to be effective the first day of the first calendar quarter that is twelve months following the effective date of a Final Rule in this docket -- Requirement R1 is proposed to be effective the first day of the first calendar quarter that is

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<sup>26</sup> NERC Petition, Exhibit F, Frequency Response Initiative Report at p. 37-38.

<sup>27</sup> NOPR at P 34 (“The Commission proposes to direct NERC to submit a report 15 months after implementation of BAL-003-1 that provides an analysis of the availability of resources for each Balancing Authority to meet its Frequency Response Obligation during the first year of implementation. The report should also provide data indicating whether actual Frequency Response was sufficient to meet each Balancing Authority’s Frequency Response Obligation. Further, upon completion of this analysis, should the findings indicate that the Frequency Response Obligation was not met, NERC should provide appropriate recommendations to ensure that frequency response can be maintained at all times within each Balancing Authority’s footprint.”).

twenty-four months following the effective date of a Final Rule in this docket.<sup>28</sup> Therefore, NERC interprets the Commission’s proposed directive “to submit a report 15 months after implementation of BAL-003-1” to apply 15 months after the effective date of Requirement R1 of the BAL-003-1 Reliability Standard. However, NERC set forth the timeline for Balancing Authority Frequency Response and Frequency Bias Setting activities in Attachment A, as illustrated below.

<b>Target Date</b>	<b>Activity</b>
April 30	The ERO reviews candidate frequency events and selects frequency events for the first quarter (December to February).
May 10	Form1 is posted with selected events from the first quarter for BA usage by the ERO.
May 15	The BAs receive a request to provide load and generation data as described in Attachment A to support FRO assignments and determining minimum FBS for BAs.
July 15	The BAs provide load and generation data as described in Attachment A to the ERO.
July 30	The ERO reviews candidate frequency events and selects frequency events for the second quarter (March to May).
August 10	Form1 is posted with selected events from the first and second quarters for BA usage by the ERO.
October 30	The ERO reviews candidate frequency events and selects frequency events for the third quarter (June to August)
November 10	Form1 is posted with selected events from the first, second, and third quarters for BA usage by the ERO.
November 20	If necessary, the ERO provides any updates to the necessary Frequency Response.
November 20	The ERO provides the fractional responsibility of each BA for the Interconnection’s FRO and Minimum FBS to the BAs.
January 30	The ERO reviews candidate frequency events and selects frequency events for the fourth quarter (September to November).
2 <sup>nd</sup> business day in February	Form1 is posted with all selected events for the year for BA usage by the ERO.
February 10	The ERO assigns FRO values to the BAs for the upcoming year.
March 7	BAs complete their frequency response sampling for all four quarters and their FBS calculation, returning the results to the ERO.
March 24	The ERO validates FBS values, computes the sum of all FBS values for

<sup>28</sup> NERC Petition at 1-2 and Exhibit B.

Target Date	Activity
	each Interconnection, and determines L10 values for the CPS 2 criterion for each BA as applicable.
Any time during first 3 business days of April (unless specified otherwise by the ERO)	The BA implements any changes to their FBS and L10 value.

Pursuant to this schedule, NERC will not receive the necessary information from the responsible entities until approximately March 24 of the year following the implementation of Requirement R1 of the BAL-003-1 Reliability Standard. Given this timeline, NERC proposes to submit a report within six months of the validation by the ERO of the Frequency Bias Setting values and computation of the sum of all Frequency Bias Setting values for each Interconnection and determination of the L10 values for the CPS 2 criterion for each Balancing Authority or, if applicable,<sup>29</sup> confirmation of the Frequency Bias Setting to be used for the calculation of the Balancing Authority ACE Limit.

The Commission also proposes to direct NERC to provide an analysis “of the availability of resources for each Balancing Authority...”<sup>30</sup> The proposed BAL-003-1 Reliability Standard allows Balancing Authorities to cooperatively form Frequency Response Sharing Groups as a means to jointly meet the obligations of the standard. Therefore, NERC requests that the Commission clarify in the Final Order that NERC should provide an analysis of the availability of resources for each Balancing Authority *or Frequency Response Sharing Group*.

In conclusion, consistent with the NOPR, NERC proposes to submit a report within six months of the validation by the ERO of the Frequency Bias Setting values and computation of

<sup>29</sup> Reliability Standard BAL-001-2, which was recently approved by the NERC Board of Trustees, could be in effect under this timeline.

<sup>30</sup> NOPR at P 34.

the sum of all Frequency Bias Setting values for each Interconnection and determination of the L10 values for the CPS 2 criterion for each Balancing Authority or, if applicable, confirmation of the Frequency Bias Setting to be used for the calculation of the Balancing Authority ACE Limit. NERC will provide an analysis of the availability of resources for each Balancing Authority or Frequency Response Sharing Group to meet its Frequency Response Obligation during the first year of implementation.<sup>31</sup> Further, upon completion of this analysis, should the findings indicate that the Frequency Response Obligation was not met, NERC will provide appropriate recommendations.

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<sup>31</sup> Following the effective date of Requirement R1 of the BAL-003-1 Reliability Standard as noted herein.

V. **Conclusion**

For the reasons stated above, NERC respectfully requests that the Commission accept these comments for consideration.

Respectfully submitted,

*/s/ Stacey Tyrewala*

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