

Consideration of Comments

Project 2007-12 Frequency Response

The Frequency Response Drafting Team thanks all commenters who submitted comments on the first formal posting for Project 2007-12 Frequency Response. These standards were posted for a 45-day public comment period from October 25, 2011 through December 9, 2011. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 43 sets of comments, including comments from approximately 133 different people from approximately 86 companies representing all 10 of the Industry Segments as shown in the table on the following pages.

All comments submitted may be reviewed in their original format on the standard's project page:

http://www.nerc.com/filez/standards/Frequency_Response.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President of Standards and Training, Herb Schrayshuen, at 404-446-2560 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

7. The second document “BAL-003-1 Background Document” provides information behind the development of the standard. Do you agree that this new document provides sufficient clarity as to the development of the standard? If not, please explain in the comment area.

Summary Consideration:

Organization	Yes or No	Question 7 Comment
Seattle City Light	Negative	Answer: Yes Comments: o LADWP and SCL note that the document “BAL-003-1 Background Document” seems to be reasonable.
Response: Thank you for your comment.		
Energy Mark, Inc.	No	Comment 14: Some of the information in this document concerning the Frequency Bias Setting for BAs participating in Overlap Regulation should be moved to the Supporting Document. This change would help in addressing Comments 3 & 4 under Question 2.
Response:		
Duke Energy	No	Please see our comments to Question 6. In addition, Duke Energy disagrees with the statement on page 9 that Attachment B will “ensure there is no negative impact on other Standards” - please see our response to Question 8 for additional information.
Response: Thank you for your comments. Please see the responses to Question 6 and 8.		
SERC OC Standards Review Group	No	Portions of the Background Document do not appear to be complete or finished. The Background Document should be edited to be consistent with changes made to the standard or other related documents (eg. elimination of the definition of SEFRD and any revisions to the draft BAL-003-1).

Organization	Yes or No	Question 7 Comment
<p>Response: The Background Documentwork in progress – expect will ultimately reside in the NERC Op Manual (similar to other stds)</p>		
ERCOT	No	Refer to comments in #1.
<p>Response: Refer to the responses in Question 1.</p>		
<p>Northeast Power Coordinating Council</p>	No	<p>Refer to the first comment in Question 6. For the Frequency Response Standard Background Document –</p> <ol style="list-style-type: none"> 1. Cite Attachment B in addition to Attachment A in the discussion of requirement R1. 2. The Balancing Authority allocation method specified in this document does not agree with that in Attachment A. 3. Drop the speculation on page 4 that most Balancing Authorities will be compliant. While it may be a commonly held belief by many that there is adequate frequency response right now, that assessment should be made after a targeted level of reliability has been defined and approved. The same comment applies on page 12. 4. On page 6, drop the inappropriate recommendation of getting frequency response through supplemental regulation. It is inappropriate to try to substitute a “minute plus” product that is deployed centrally by the Balancing Authority for a “sub-minute” product that is deployed automatically without any Balancing Authority action. When a pseudo-tie is used, changes in the ACE values due to supplemental regulation are unrelated to and not coordinated with the need to deploy frequency response. Not only should this approach not be offered as an alternative, but the FRSDT should actively conduct research to determine if supplemental regulation via a pseudo-tie should be deliberately REMOVED from any actual net interchange calculation that may include it. This comment also applies to the mentioning of supplemental regulation on page 11 as well. 5. On page 7, the reference to a 24 hour window on each side of the frequency bias

Organization	Yes or No	Question 7 Comment
		<p>setting implementation date is inconsistent with the wording of the standard. The standard states that any time within the designated date is acceptable.</p> <p>6. On page 8, the inclusion of “for training purposes” as a reason to not operate in tie line bias control should be dropped. This training can be done in a training simulator. If it is determined that it should be supported, then the requirement needs to be reworded to allow it explicitly.</p> <p>7. On page 14, the sentence: “This approach would only provide feedback for performance during that specific event and would not provide insight into the depth of response or other limitations” is difficult to understand. The paragraph would read better by simply deleting the sentence.</p>
<p>Response: Refer to responses to Question 6 for response to those comments.</p> <p>Comment 1 – The drafting team made appropriate modifications to the background document ACTION REQUIRED</p> <p>Comment 2 – The drafting team has corrected the reference so both documents agree. The drafting team is proposing to use historical information rather than forecasted information for the allocation of the Frequency Response Obligation. ACTION REQUIRED</p> <p>Comment 3 – The drafting team has removed the speculative language and replaced it with more appropriate language. ACTION REQUIRED</p> <p>Comment 4 - While the drafting team agrees that it is inappropriate to expect supplementary regulation to transfer frequency response successfully, we do not want to prevent any innovative solution that will transfer frequency response through the use of a pseudo-tie among Balancing Authorities. Also, the drafting team believes that Balancing Authorities exchanging supplementary regulation via a pseudo-tie have to be consistent in the removal or inclusion of it in their actual net interchange measurement as well as all events across the measurement period.</p> <p>Comment 5 – The drafting team has corrected the background document to accurately reflect the language proposed in the standard. ACTION REQUIRED</p> <p>Comment 6 – The drafting team has modified the background document to remove the training language. ACTION REQUIRED</p> <p>Comment 7 – The drafting team revised the paragraph to make it read better. ACTION REQUIRED</p>		

Organization	Yes or No	Question 7 Comment
Xcel Energy	No	Same comment here as the one in question 6.
Response: same as 6		
ISO New England Inc	No	<p>See first comment in 6 above. Also, Frequency Response Standard Background Document –</p> <ol style="list-style-type: none"> 1. Cite Attachment B in addition to Attachment A in the discussion of requirement 1. 2. The Balancing Authority allocation method specified in this document does not agree with that in Attachment A. 3. Drop the speculation on page 4 that most Balancing Authorities will be compliant. While it may be a commonly held belief by many that there is adequate frequency response right now, that assessment should be made after a targeted level of reliability has been defined and approved. The same comment applies on page 12. 4. On page 6, drop the inappropriate recommendation of getting frequency response through supplemental regulation. It is inappropriate to try to substitute a “minute plus” product that is deployed centrally by the Balancing Authority for a “sub-minute” product that is deployed automatically without any Balancing Authority action. When a pseudo-tie is used, changes in the ACE values due to supplemental regulation are unrelated to and not coordinated with the need to deploy frequency response. Not only should this approach not be offered as an alternative, but the FRSDT should actively conduct research to determine if supplemental regulation via a pseudo-tie should be deliberately REMOVED from any actual net interchange calculation that may include it! This comment also applies to the mentioning of supplemental regulation on page 11 as well. 5. On page 7, the reference to a 24 hour window on each side of the frequency bias setting implementation date is inconsistent with the wording of the requirement. The requirement says that any time within the designated date is acceptable. 6. On page 8, the inclusion of “for training purposes” as a reason to not operate in tie

Organization	Yes or No	Question 7 Comment
		<p>line bias control should be dropped. This sort of training can be done in a training simulator. Alternatively, if it is determined that it should be supported, then the requirement needs to be reworded to allow it explicitly.</p> <p>7. On page 14, the sentence: “This approach would only provide feedback for performance during that specific event and would not provide insight into the depth of response or other limitations” is difficult to understand. The paragraph would read better by simply dropping it.</p>
<p>Response: Same as NPCC above.</p>		
Western Electricity Coordinating Council	No	See response to question 6.
<p>Response: See response to comments under Question 6.</p>		
Alberta Electric System Operator	No	The Background Document uses BA Peak Generation in the BA FRO allocation formula. Attachment A uses BA Installed Capacity. The AESO suggests making the two formulae consistent.
<p>Response: The drafting team has corrected the reference so both documents agree. The drafting team is proposing to use historical information rather than forecasted information for the allocation of the Frequency Response Obligation.</p>		
Florida Municipal Power Agency	No	The document does not discuss how the new reliability parameter will affect BAs
<p>Response: The new standard will require that Balancing Authorities meet a level of response to frequency events equal to or more than its obligation. (will require plan & tracking FR to Req)</p>		
JEA Electric Compliance	No	The document does not discuss how the new reliability parameter will affect BAs
<p>Response:</p>		

Organization	Yes or No	Question 7 Comment
MRO NSRF	No	<p>the MRO NSRF has restated the same answer as in question 6 on purpose. Confusion exists around the “peak load” in that Attachment A states the allocation is based on Projected Peak Loads and Generation but the Background Document states it will use a historical Peak and Generation to make the allocation. Also, for the BA installed capacity, where is that value derived from and does NERC obtain that from FERC form data or does the BA provide that information somewhere specific to this effort? Additionally, there appears to be a difference in how FRO is calculated in Attachment A and what is described in the Background Document. These differences should be reconciled such that both documents address the same approach. If installed capacity is used in the equation, how are variable/intermittent resources (e.g. wind, solar) accounted for? At full capacity? Please clarify.</p> <p>Page 7 (3rd paragraph) of the Background document states “Given the fact that BA’s can encounter staffing or EMS change issues coincident with the date the ERO sets for new Frequency Bias Setting implementation, the standard provides a 24 hour window on each side of the target date.</p> <p>1) The Standard itself does not state this provision (24 hour window on each side of target date) as indicated.</p> <p>2) The SDT accurately addresses the fact that BA’s could have EMS or staffing issues during implementation of the ERO validated FBS. The current stated 72-hour window is not long enough for implementation of the FBS as there may be a host of issues that could impact implementation. We suggest that a seven day window be used for implementation of the FBS.</p>
<p>Response: The drafting team has corrected the background document to accurately reflect the language proposed in the standard.</p>		
Texas Reliability Entity	No	<p>There is an inconsistency between the Background Document and Attachment A. Attachment A only proposes event criteria based on “the largest category C (N-2) event identified,” but the Background Document says: “Attachment A proposes the following Interconnection event criteria as a basis to determine an Interconnection’s</p>

Organization	Yes or No	Question 7 Comment
		Frequency Response Obligation: - Largest category C loss-of-resource (N-2) event; - Largest total generating plant with common voltage switchyard; - Largest loss of generation in the interconnection in the last 10 years.”
Response: The drafting team has corrected the reference so both documents agree.		
Great River Energy/ACES Power Marketing Standards Collaborators	No	We can find no document titled “BAL-003-1 Background Document”. We assume this question is referring to the “Frequency Response Standard Background Document” dated October 2011. We do not believe the document provides sufficient clarity. No explanation is provided for why RSG was added to Requirement R1. There are typos contained in the document. On page 6 in NIA, the A should be in subscript. On page 7 in bullet 4 in the first sentence, “The” should be in lowercase
Response: Your assumption was correct. The drafting team has corrected these typos.		
Southern Company	No	We suggest the Background Document should be edited to be consistent with changes made to the standard or other related documents (eg. Any revisions to draft BAL-003-1 and removal of the definition of SEFRD).
Response: Thank you for your comments. The drafting team revised the background document based upon modifications to the standard as well as modifications to other documents related to the standard.		
Seattle City Light	Yes	o LADWP and SCL note that the document “BAL-003-1 Background Document” seems to be reasonable.
Response: Thank you for your comments.		
Constellation Energy Commodities Group	Yes	Should be revisited based on the proposed modifications to the requirements.
Response: Thank you for your comments. The drafting team revised the background document based upon modifications to the		

Organization	Yes or No	Question 7 Comment
<p>standard as well as modifications to other documents related to the standard.</p>		
<p>Los Angeles Department of Water and Power</p>	<p>Yes</p>	<p>LADWP notes that the document “BAL-003-1 Background Document” seems to be reasonable.</p>
<p>Response: Thank you for your comments.</p>		
<p>Keen Resources Asia Ltd.</p>	<p>Yes</p>	<p>Paragraph 4 on page 5 of the Background Document provides a statistically correct description of event selection without sample pre-selection and should followed instead of the erroneous criteria 2 & 7 in Attachment A. The risk-based approach to determining FRM, that the Background Document mentions in paragraph 4 of page 4 is being evaluated by the drafting team for application in this standard, should be considered for deployment as soon as possible to replace the administered method currently proposed in this standard, because the administered method lacks any technical justification. No such justification was ever attempted in the development of this standard. The administrative method of determining FRM is therefore but a highly dubious "quick fix" until the risk-based method is evaluated and implemented. The administrative method is in fact perverse because it discourages BAs from reducing their contribution to frequency error by refusing to reduce the BA's FRO accordingly, and because it encourages BAs to contribute to frequency error without increasing their FRO.</p>
<p>Response: The standard has to be written with what will be used day one. Due to the timeline that NERC has filed with FERC, there is not enough time to evaluate a second methodology. Continuing to investigate alternatives</p>		
<p>Manitoba Hydro</p>	<p>Yes</p>	<p>Please see MH’s response to Question 1 regarding the term Single Event Frequency Response Data. Additionally, the discussion in this document is useful in clarifying the intent of the drafting team, but some of this clarification would best be incorporated into the Standard itself. Ex. RSG requirement on page 6. Also on page 7 Attachment A does not specify what validation is and how it is done. Attachment A refers to BA providing FBS data to ERO which then validates and publishes. This should be</p>

Organization	Yes or No	Question 7 Comment
		reflected in R2.
Response: Need to copy in language related to ERO validation of FBS		
NV Energy	Yes	This is a good reference; however see response to Question 6 in that there appears to be a discrepancy between Att A and the Background Document with regard to FRO calculation.
Response: The drafting team has corrected the discrepancy so both documents now agree. The drafting team is proposing to use historical information rather than forecasted information for the allocation of the Frequency Response Obligation.		
Cleco Corporation/SPP Standards Review Group	Yes	We appreciate the effort of the SDT in developing the Background Document. It provided insight on how the SDT got the proposed standard to where it is with this posting.
Response: Thank you for your comments.		
Imperial Irrigation District	Yes	
Southwest Power Pool Regional Entity	Yes	
Salt River Project	Yes	
Progress Energy	Yes	
Florida Power & Light Company	Yes	
FPL	Yes	

Organization	Yes or No	Question 7 Comment
FMPP	Yes	
Tucson Electric Power	Yes	
Associated Electric Cooperative Inc	Yes	
South Carolina Electric and Gas	Yes	
Ameren	Yes	
Hydro-Quebec TransEnergie	Yes	
ISO/RTO Council Standards Review Committee/ Independent Electricity System Operator		We do not have an opinion on whether or not the Background Document provides sufficient clarity to the development of the standard. We do, however, suggest that the SDT consider our comments in Q6, above, and move some of the information from Attachments A and B to or combine with the Background Document, to the Background Document to provide all the technical basis and background behind the elements stipulated in the requirements.
Response: Refer to the responses to the ISO/RTO Council under Question 6.		
Bonneville Power Administration		
Sacramento Municipal Utility District (SMUD)		
Arizona Public Service Company		

Organization	Yes or No	Question 7 Comment
American Electric Power		
ReliabilityFirst		

DRAFT