

## Review of BAL-003-0.1b—Frequency Response and Bias (Filing 2)

[http://www.nerc.com/files/BAL-003-0\\_1b.pdf](http://www.nerc.com/files/BAL-003-0_1b.pdf)

### VSL for Requirement R2:

Standard, Requirement	Requirement Language	Lower	Moderate	High	Severe	Notes
BAL-003-0.1b, R2	Each Balancing Authority shall establish and maintain a Frequency Bias Setting that is as close as practical to, or greater than, the Balancing Authority's Frequency Response. Frequency Bias may be calculated several ways:  <b>R2.1.</b> The Balancing Authority may use a fixed Frequency Bias value which is based	<del>N/A</del> <del>The Balancing Authority's determination of the fixed Frequency Bias value was not based on observations and averaging the Frequency Response from Disturbances during on-peak hours.</del>  <del>OR</del>  <del>The Balancing Authority's variable frequency bias maintained was not based on an analysis of Frequency</del>	<u>The Balancing Authority's determination of the fixed Frequency Bias value was not based on observations and averaging the Frequency Response from Disturbances during on-peak hours.</u>  OR  <u>The Balancing Authority's variable frequency bias maintained was not based on an analysis of Frequency Response as it</u>	N/A	The Balancing Authority did not establish and maintain a Frequency Bias Setting that was as close as practical to, or greater than, the Balancing Authority's Frequency Response.	FERC characterized this as a Guideline 1 issue, stating that failure to calculate frequency bias should be at least a moderate VSL.  NERC staff agrees that, in this case, failure to calculate frequency bias should be at least a moderate VSL and proposes that the lower VSLs be moved to moderate.

	<p>on a fixed, straight-line function of Tie Line deviation versus Frequency Deviation. The Balancing Authority shall determine the fixed value by observing and averaging the Frequency Response for several Disturbances during on-peak hours.</p> <p><b>R2.2.</b> The Balancing Authority may use a variable (linear or non-linear) bias value, which is based on a variable function of Tie Line deviation to Frequency Deviation. The Balancing</p>	<p><del>Response as it varied with factors such as load, generation, governor characteristics, and frequency.</del></p>	<p><u>varied with factors such as load, generation, governor characteristics, and frequency.</u> N/A</p>			
--	--	---	--	--	--	--

	<p>Authority shall determine the variable frequency bias value by analyzing Frequency Response as it varies with factors such as load, generation, governor characteristics, and frequency.</p>					
--	---	--	--	--	--	--

**Original Guideline Explanation for R2 VSLs in [December 1, 2010 VSL Filing 2](#):**

The VSLs were modified to be consistent with Guideline 3. Consistent with Guidelines filed with FERC on August 10, 2009, NERC incorporated the subrequirements into the main requirement VSL so that compliance is based on meeting criteria specified in components.

- *Guideline 1:* P. 854-855 of Guideline 1 Analysis in [March 5, 2012 VSL Filing 1](#)
- *Guideline 2:* The VSLs comply with Guideline 2. The requirement has gradated VSLs; therefore, Guideline 2a is not applicable. The gradated VSLs ensure uniformity and consistency among all approved Reliability Standards in the determination of penalties. NERC has reviewed the VSL text and has determined that, as written, the VSL text is clear, specific and objective and does not contain general, relative or subjective language, satisfying Guideline 2b. The text is not subject to the possibility of multiple interpretations of the VSLs and provides the clarity needed to permit the consistent and objective application of the VSLs in the determination of penalties by the Compliance Enforcement Authority. Therefore, no changes to the VSLs were necessary for consistency with FERC Guideline 2.
- *Guideline 3:* NERC Staff compared the revised VSLs to the stated requirement language to ensure the VSLs do not redefine or undermine the requirement's reliability goal. The original VSLs did not address the case in which an entity did not establish a Frequency Bias setting.

The VSLs were modified to be consistent with the requirement. In accordance with Guideline 3, the VSL assignments are consistent with the requirement and the degree of compliance can be determined objectively and with certainty.

- *Guideline 4:* The VSL assignments comply with Guideline 4, because they are based on a single violation of a Reliability Standard and are not based on a cumulative number of violations of the same requirement over a period of time.