

Mapping Document

Project 2017-01 Modifications to BAL-003 – Phase II

Standard: BAL-003-3		
Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
<p>BAL-003-2, Requirement R1</p> <p>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: High][Time Horizon: Real-time Operations]</p>	<p>BAL-003-3, Requirement 1</p> <p>Each Responsible Entity shall achieve an annual Frequency Response Compliance Measure (FRCM) (as calculated and reported in accordance with Attachment A) that is greater than or equal to one to ensure that sufficient Frequency Response is provided by each Responsible Entity to maintain Interconnection Frequency Response equal to or more negative than the Interconnection Frequency Response Obligation. <i>[Violation Risk Factor: High] [Time Horizon: Real-time Operations]</i></p>	<p>Requirement R1 was revised to align with Section 4, Applicability, in the revised Reliability Standard.</p> <p>4. Applicability:</p> <p>4.1. Functional Entities:</p> <p>4.1.1. Responsible Entity</p> <p>4.1.1.1. Balancing Authority</p> <p>4.1.1.1.1. Balancing Authority is the responsible entity unless the Balancing Authority is a member of a Frequency Response Sharing Group, in which case, the Frequency Response Sharing Group becomes the responsible entity.</p> <p>4.1.1.2. Frequency Response Sharing Group</p>

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		<p>4.1.2 Generator Operator</p> <p>Requirement R1 was revised to update “Frequency Response Measure (FRM)” to the revised term of “Frequency Response Compliance Measure (FRCM)”</p>
<p>BAL-003-2, Measure M1</p> <p>Each Frequency Response Sharing Group or Balancing Authority that is not a member of a Frequency Response Sharing Group shall have evidence such as dated data plus documented formula in either hardcopy or electronic format that it achieved an annual FRM (in accordance with the methods specified by the ERO in Attachment A with data from FRS Form 1 reported to the ERO as specified in Attachment A) that is equal to or more negative than its FRO to demonstrate compliance with Requirement R1.</p>	<p>BAL-003-3, Measure M1</p> <p>Each Responsible Entity shall have evidence such as dated data plus documented formula in either hardcopy or electronic format that it achieved an annual FRCM (in accordance with the methods and data specified by the ERO in Attachment A) that is greater than or equal to one to demonstrate compliance with Requirement R1.</p>	<p>Measure M1 was revised to reflect the revision to “Responsible Entity.” In addition, the Reliability Standard revisions reflect the expectation that obligations associated with reporting FRM will eventually transition from occurring under the Reliability Standard and occur under a request issued pursuant to NERC Rules of Procedure (ROP)¹, Section 1600 – Request for Data or Information, subject to NERC Board of Trustees approval. Reference to FRS Form 1 has been removed.</p>
<p>BAL-003-2, Requirement R2</p> <p>Each Balancing Authority that is a member of a multiple Balancing Authority Interconnection and is not receiving Overlap Regulation Service and uses a fixed Frequency Bias Setting shall implement the Frequency Bias Setting determined</p>	<p>BAL-003-3, Requirement R2</p> <p>Each Balancing Authority that is a member of a multiple Balancing Authority Interconnection and is not receiving Overlap Regulation Service and uses a fixed Frequency Bias Setting shall implement the Frequency Bias Setting</p>	<p>Requirement R2 was revised from Area Control Error (ACE) to Reporting ACE to eliminate the Reporting Area Control Error (ACE) conflict in the Western Interconnection’s Automatic Time Error Correction (ATEC) process.</p>

¹ NERC Rules of Procedure are available at: https://www.nerc.com/AboutNERC/RulesOfProcedure/NERC_ROP_With_Appendices.pdf

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in BAL-003-2 – Frequency Response and Frequency Bias Setting Page 2 of 13 accordance with Attachment A, as validated by the ERO, into its Area Control Error (ACE) calculation during the implementation period specified by the ERO and shall use this Frequency Bias Setting until directed to change by the ERO. [Risk Factor: Medium][Time Horizon: Operations Planning]	determined in accordance with Attachment A, as validated by the ERO, into its Reporting ACE calculation during the implementation period specified by the ERO and shall use this Frequency Bias Setting until directed by the ERO to change. <i>[Violation Risk Factor: Medium]</i> <i>[Time Horizon: Operations Planning]</i>	
BAL-003-2, Measure M2 The Balancing Authority that is a member of a multiple Balancing Authority Interconnection and is not receiving Overlap Regulation Service shall have evidence such as a dated document in hard copy or electronic format showing the ERO validated Frequency Bias Setting was implemented into its ACE calculation within the implementation period specified or other evidence to demonstrate compliance with Requirement R2.	BAL-003-3, Measure M2 The Balancing Authority that is a member of a multiple Balancing Authority Interconnection and is not receiving Overlap Regulation Service shall have evidence such as a dated document in hard copy or electronic format showing the ERO validated Frequency Bias Setting was implemented into its Reporting ACE calculation within the implementation period specified or other evidence to demonstrate compliance with Requirement R2.	Measure M2 was revised from Area Control Error (ACE) to Reporting ACE to eliminate the Reporting Area Control Error (ACE) conflict in the Western Interconnection’s Automatic Time Error Correction (ATEC) process.
BAL-003-2, Requirement R4 Each Balancing Authority that is performing Overlap Regulation Service shall modify its Frequency Bias Setting in its ACE calculation, in order to represent the Frequency Bias Setting for the combined Balancing Authority Area, to be	BAL-003-3, Requirement R4 Each Balancing Authority that is performing Overlap Regulation Service shall modify its Frequency Bias Setting in its Reporting ACE calculation, in order to represent the Frequency Bias Setting for the combined Balancing	Requirement R4 was revised from Area Control Error (ACE) to Reporting ACE to eliminate the Reporting Area Control Error (ACE) conflict in the Western Interconnection’s Automatic Time Error Correction (ATEC) process.

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<p>equivalent to either: [Risk Factor: Medium][Time Horizon: Operations Planning]</p> <ul style="list-style-type: none"> • The sum of the Frequency Bias Settings as shown on FRS Form 1 and FRS Form 2 for the participating Balancing Authorities as validated by the ERO, or • The Frequency Bias Setting shown on FRS Form 1 and FRS Form 2 for the entirety of the participating Balancing Authorities' Areas. 	<p>Authority Area, to be equivalent to either: <i>[Violation Risk Factor: Medium][Time Horizon: Operations Planning]</i></p> <ul style="list-style-type: none"> • The sum of the Frequency Bias Settings as validated by the ERO for the participating Balancing Authorities, or • The Frequency Bias Setting as validated by the ERO for the entirety of the participating Balancing Authorities' Areas. 	
<p>BAL-003-2, Measure M4</p> <p>The Balancing Authority shall have evidence such as a dated operating log, database or list in hard copy or electronic format showing that when it performed Overlap Regulation Service, it modified its Frequency Bias Setting in its ACE calculation as specified in Requirement R4 to demonstrate compliance with Requirement R4.</p>	<p>BAL-003-3, Measure M4</p> <p>The Balancing Authority shall have evidence such as a dated operating log, database or list in hard copy or electronic format showing that when it performed Overlap Regulation Service, it modified its Frequency Bias Setting in its Reporting ACE calculation as specified in Requirement R4 to demonstrate compliance with Requirement R4.</p>	<p>Requirement R4 was revised from Area Control Error (ACE) to Reporting ACE to eliminate the Reporting Area Control Error (ACE) conflict in the Western Interconnection's Automatic Time Error Correction (ATEC) process.</p>
	<p>BAL-003-3, Requirement R5</p>	

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	<p>Each Generator Operator shall operate each generating unit/generating facility connected to an Interconnection with its Governor in speed or frequency control mode unless: <i>[Violation Risk Factor = Medium] [Time Horizon = Real-time Operations]</i></p> <ul style="list-style-type: none"> • The generating unit/generating facility is not equipped with a Governor; • System operating conditions are incompatible with the generating unit/generating facility operating the Governor in speed or frequency control mode as determine by the Balancing Authority; or • The generating unit/generating facility is being operate start-up, shut-down, or other temporary mode that requires the Governor speed or frequency control mode to be temporarily disabled. <p>5.1 Other control modes, such as outer loop control, shall not override the Primary Frequency Response of the Governor.</p>	<p>Requirement R5 is being added to the Reliability Standard to require that units with Governors operate with the Governors in service and that other controls do not override any PFR that is provided.</p>

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	<p>BAL-003-3, Measure M5</p> <p>The Generator Operator shall have evidence to show that it operated each generating unit/generating facility connected to an Interconnection with its Governor in speed or frequency control mode as specified in Requirement R5, Part R5.1, unless it meets one of the bulleted exceptions. Examples of suitable evidence may include, but is not limited to, performance testing, records showing Primary Frequency Response of a unit to frequency disturbances, appropriate documentation and/or control system settings that show the Governor is enabled (droop, deadband, control mode enable/disable, etc., as applicable).</p>	<p>Measure M5 is being added to the Reliability standard to reflect the addition of Requirement R5 and to make it measurable.</p>