Standard Development Roadmap

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed:

- 1. The SAR for Project 2007-18, Reliability-based Controls, was posted for a 30-day formal comment period on May 15, 2007.
- 2. A revised SAR for Project 2007-05, Reliability-based Controls, was posted for a second 30-day formal comment period on September 10, 2007.
- 3. The Standards Committee approved Project 2007-18, Reliability-based Controls, to be moved to standard drafting on December 11, 2007.
- 4. The SAR for Project 2007-05, Balancing Authority Controls, was posted for a 30-day formal comment period on July 3, 2007.
- 5. The Standards Committee approved Project 2007-05, Balancing Authority Controls, to be moved to standard drafting on January 18, 2008.
- The Standards Committee approved the merger of Project 2007-05, Balancing Authority Controls, and Project 2007-18, Reliability-based Control, as Project 2010-14, Balancing Authority Reliability-based Controls, on July 28, 2010.
- 7. The NERC Standards Committee approved breaking Project 2010-14, Balancing Authority Reliability-based Controls, into two phases and moving Phase 1 (Project 2010-14.1, Balancing Authority Reliability-based Controls Reserves) into formal standards development on July 13, 2011.

Proposed Action Plan and Description of Current Draft:

This is the first posting of the proposed new standard. This proposed draft standard will be posted for a 30-day formal comment period beginning on June 4, 2012 through July 3, 2012.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Second posting	October/November 2012
2. Initial Ballot	November 2012
3. Third posting	March/April 2013
4. Successive ballot	May 2013
5. Recirculation Ballot	August 2013

Standard BAL-012-1 – Operating Reserve Planning

6. NERC BOT adoption.	September 2013
-----------------------	----------------

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the glossary.

Frequency Responsive Reserve: An amount of reserve automatically responsive to locally sensed frequency deviation during the primary control time frame.

A. Introduction

1. Title: Operating Reserve Planning

2. Number: BAL-012-1

3. Purpose: To plan for adequate Regulating Reserve, Contingency Reserve, and Frequency Responsive Reserve to maintain Balancing Authority Load and resource balance to ensure reliable operation of the Bulk Electric System.

4. Applicability:

- 4.1. Balancing Authority
- 4.2. Reserve Sharing Group

5. (Proposed) Effective Date:

5.1. First day of the first calendar quarter that is 12 months beyond the date that this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective the first day of the first calendar quarter that is 12 months beyond the date this standard is approved by the NERC Board of Trustees', or as otherwise made pursuant to the laws applicable to such ERO governmental authorities.

B. Requirements

- **R1.** Each Balancing Authority shall, once each calendar year, with no more than 15 calendar months between intervals, document its annual plan for Regulating Reserve used to manage the Balancing Authority's Area Control Error (ACE) addressing each of the following: [Violation Risk Factor:] [Time Horizon:]
 - **1.1.** The determination of the Balancing Authority's regulating margin.
 - **1.2.** The types of resources and the portion of their capacity included in the regulating margin.
 - **1.3.** The control of supply and demand resources (such as generators, controllable Loads, and energy storage devices).
 - **1.4.** The incorporation of energy exports and imports by entities within the Balancing Authority Area, and with other Balancing Authorities, including an assessment of the ability of the Balancing Authority's resources to meet the net ramping requirements associated with these transactions.
 - **1.5.** The characteristics (such as capabilities, constraints, and volatilities) of the resources operating inside the Balancing Authority Area.
 - **1.6.** The characteristics (such as capabilities, constraints, and volatilities) of the Load operating inside the Balancing Authority Area.

- **1.7.** The exclusion of any shared portions of regulating resources included in another Balancing Authority's Regulating, Contingency, or Frequency Responsive Reserve plans.
- **R2.** Each Balancing Authority and Reserve Sharing Group shall, once each calendar year, with no more that 15 calendar months between intervals, document its annual plan for Contingency Reserve used to recover from Balancing Contingency Events addressing each of the following: [Violation Risk Factor:] [Time Horizon:]
 - **2.1.** The determination of the Balancing Authority's or Reserve Sharing Group's Contingency Reserve margin.
 - **2.2.** The types of resources and the portion of their capacity capable of reducing the Balancing Authority's Area Control Error in response to each of the following:
 - **2.2.1.** Balancing Contingency Event.
 - 2.2.2. Events associated with Energy Emergency Alert 2. And
 - **2.2.3.** Events associated with Energy Emergency Alert 3.
 - **2.3.** The control of supply and demand resources such as generators, controllable Loads, and energy storage devices.
 - **2.4.** The incorporation of energy import and export schedules by entities within the Balancing Authority Area and with other Balancing Authorities.
 - **2.5.** The characteristics (such as capabilities, constraints, and volatilities) of the resources operating inside the Balancing Authority Area.
 - **2.6.** The characteristics (such as capabilities, constraints, and volatilities) of the Load operating inside the Balancing Authority Area.
 - **2.7.** The exclusion of any portion of shared contingency resources included in another Balancing Authority's Regulating, Contingency, or Frequency Responsive Reserve plans.
 - **2.8.** The amount of the Balancing Authority's or Reserve Sharing Group's resources that can be reduced in response to a Large Loss of Load Event.
- **R3.** Each Balancing Authority and Frequency Response Sharing Group shall, once each calendar year, with no more than 15 calendar months between intervals, document its annual plan for Frequency Responsive Reserve to arrest frequency change during imbalance events addressing each of the following: [Violation Risk Factor:] [Time Horizon:]
 - **3.1.** The Frequency Response Obligation (FRO) assigned to the Balancing Authority or Frequency Response Sharing Group.
 - **3.2.** The minimum amount and capability of resources required to meet the Balancing Authority's or Frequency Response Sharing Group's FRO.

- **3.3.** The Frequency Responsive capabilities of generation operating inside the Balancing Authority Area or Frequency Response Sharing Group.
- **3.4.** The Frequency Responsive capabilities of Load operating inside the Balancing Authority Area or Frequency Response Sharing Group.
- **3.5.** The Frequency Responsive capabilities of energy storage devices operating inside the Balancing Authority Area or Frequency Response Sharing Group.
- **3.6.** The exclusion of any portion of shared Frequency Responsive resources included in another Balancing Authority's Regulating, Contingency, or Frequency Responsive Reserve plans.
- **3.7.** The amount of Frequency Responsive Reserve provided through contractual agreements.
- **R4.** Each Reserve Sharing Group or Frequency Response Sharing Group shall have a signed agreement among the participating Balancing Authorities addressing each of the following: [Violation Risk Factor:] [Time Horizon:]
 - **4.1.** The minimum reserve requirement for the group.
 - **4.2.** Allocation of reserves among members.
 - **4.3.** The procedure for activating reserves.
 - **4.4.** Reporting and recordkeeping processes.
- **R5.** Each Balancing Authority shall perform at least a weekly review of its operational plan(s) for the next seven days for Regulating Reserve, Contingency Reserve, and Frequency Responsive Reserve to ensure sufficient reserves to support reliable operation of the Bulk Electric System. [Violation Risk Factor:][Time Horizon:]
- **R6.** Each Balancing Authority shall assess, on at least an hourly basis, that it has sufficient Regulating Reserve, Contingency Reserve, and Frequency Responsive Reserve to meet its reserve plan(s) to ensure reliable operation of the Bulk Electric System. [Violation Risk Factor:][Time Horizon:]
- **R7.** Each Balancing Authority shall evaluate that its aggregate amount of planned Regulating Reserve, Contingency Reserve, and Frequency Responsive Reserve margin(s) above and below its forecasted demand is within the operating limits of its resources to ensure reliable operation of the Bulk Electric System. [Violation Risk Factor:][Time Horizon:]

C. Measures

M1. Each Balancing Authority shall have a dated Regulating Reserve plan, either in hardcopy or electronic format, in accordance with Requirement R1.

- **M2.** Each Balancing Authority or Reserve Sharing Group shall have a dated Contingency Reserve plan, either in hardcopy or electronic format, in accordance with Requirement R2.
- **M3.** Each Balancing Authority or Frequency Response Sharing Group shall have a dated Frequency Responsive Reserve plan, either in hardcopy or electronic format, in accordance with Requirement R3.
- **M4.** Each Reserve Sharing Group or Frequency Response Sharing Group shall have a dated signed agreement in accordance with Requirement R4.
- **M5.** Each Balancing Authority shall have evidence, such as a dated operational plan, that it reviewed and updated, as needed its Regulating Reserve, Contingency Reserve, and Frequency Responsive Reserve plan(s) in compliance with Requirement R5.
- **M6.** Each Balancing Authority shall have evidence; such as dated computer printouts, dated operator logs, or dated results of the assessments with assumptions, either in hardcopy or electronic format, that it performed an hourly assessment of its Regulating Reserve, Contingency Reserve, and Frequency Responsive Reserve in compliance with Requirement R6.
- **M7.** Each Balancing Authority shall have evidence; such as a dated operational plan with specified elements, either in hardcopy or electronic format, that it planned for Regulating Reserve, Contingency Reserve, and Frequency Responsive Reserve in compliance with Requirement R7.

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Data Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit.

The Balancing Authority, Reserve sharing Group, or Frequency Response Sharing Group shall retain data or evidence to show compliance with Requirements R1 through R7, and Measures M1 through M7, for the current year, plus three calendar years, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

If a Balancing Authority, Reserve Sharing Group, or Frequency Response Sharing Group is found noncompliant, it shall keep information related to the noncompliance until found compliant or for the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all subsequent requested and submitted records.

1.3. Compliance Monitoring and Assessment Processes

Compliance Audits

Self-Certifications

Spot Checking

Compliance Investigations

Self-Reporting

Complaints

1.4. Additional Compliance Information

None.

2. Violation Severity Levels

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1				
R2				
R3				
R4				
R5				
R6				
R7				

E. Regional Variances

None.

F. Associated Documents

BAL-012-1 Operating Reserve Planning Background Document

Version History

Version Date Action Change Tracking

Standard BAL-012-1 – Operating Reserve Planning

1	NERC BOT Adoption	New Standard