

**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.
6. 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 in accordance with Results-Based Criteria. This proposed draft standard will be posted for a 30-day formal comment period beginning on December ??, 2011 through January ??, 2012.

**Future Development Plan:**

<b>Anticipated Actions</b>	<b>Anticipated Date</b>
1. Second posting	May/June 2012
2. Initial Ballot	June 2012
3. Recirculation Ballot	September 2012
4. NERC BOT adoption.	October 2012

### 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 local frequency deviation during the primary control time frame.

### A. Introduction

1. **Title:**        **Operating Reserve Planning**
2. **Number:**    **BAL-012-0**
3. **Purpose:**     To plan for adequate Regulating Reserve, Contingency Reserve and Frequency Responsive Reserve to maintain Balancing Authority load/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. In those jurisdictions where regulatory approval is required this standard shall become effective the first calendar day of the first calendar quarter twelve (12) months after applicable regulatory approval.
  - 5.2. In those jurisdictions where no regulatory approval is required this standard shall become effective the first calendar day of the first calendar quarter twelve (12) months after Board of Trustees adoption.

### B. Requirements

- R1. Each Balancing Authority shall annually document its plan for Regulating Reserve addressing: [*Violation Risk Factor:*] [*Time Horizon:* ]
  - 1.1. The determination of the Balancing Authority's regulating margin.
  - 1.2. The amounts and types of resources used to manage the Balancing Authority's Area Control Error.
  - 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 the ability of resources to meet the net ramping requirement associated with these transactions.
  - 1.5. The characteristics of the regulating resources operating inside the Balancing Authority Area.
  - 1.6. The characteristics of the load operating inside the Balancing Authority Area.
  - 1.7. The exclusion of (those portions of) shared regulating resources included in another Balancing Authority's Regulating, Contingency, or Frequency Responsive Reserve plans.
- R2. Each Balancing Authority and Reserve Sharing Group shall annually document its plan for Contingency Reserve addressing: [*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 amounts and types of resources capable of reducing the Balancing Authority's Area Control Error in response to a Balancing Contingency Event and events associated with Energy Emergency Alert 2 and 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 imports and exports schedules by entities within the Balancing Authority Area and with other Balancing Authorities.
  - 2.5. The characteristics of the supply resources operating inside the Balancing Authority Area.
  - 2.6. The characteristics of the load operating inside the Balancing Authority Area.
  - 2.7. The exclusion of (those portions 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 Reserve Sharing Group shall annually document its plan for Frequency Responsive Reserve addressing: *[Violation Risk Factor:] [Time Horizon: ]*
- 3.1. The Frequency Response Obligation (FRO) assigned to the Balancing Authority or Reserve Sharing Group.
  - 3.2. The amounts and types of resources required to meet the Balancing Authority's or Reserve Sharing Groups FRO.
  - 3.3. The frequency responsive capabilities of supply operating inside the Balancing Authority or Reserve Sharing Group Area.
  - 3.4. The frequency responsive capabilities of load operating inside the Balancing Authority or Reserve Sharing Group Area.
  - 3.5. The frequency responsive capabilities of energy storage devices operating inside the Balancing Authority or Reserve Sharing Group Area.
  - 3.6. The exclusion of (those portions 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 shall have a signed agreement among the participating Balancing Authorities addressing: *[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/record keeping process

**4.5.** The method for handling compliance penalties

- R5.** Each Balancing Authority shall perform at least a weekly review, and update as needed, its operational plan for the next seven days for Regulating Reserve, Contingency Reserve and Frequency Responsive Reserve to ensure sufficient reserves are available to support reliable operation of the Bulk Electric System. [*Violation Risk Factor:* ] [*Time Horizon:* ]
- R6.** Each Balancing Authority shall estimate and assess, on at least an hourly basis, that they have sufficient Regulating Reserve, Contingency Reserve and Frequency Responsive Reserve to meet their reserve plan(s) to ensure reliable operation of the Bulk Electric System. [*Violation Risk Factor:* ] [*Time Horizon:* ]
- R7.** Each Balancing Authority shall plan for an aggregate amount of Regulating Reserve, Contingency Reserve and Frequency Responsive Reserve above and below its forecasted demand to be within the operating limits of the resources dedicated to meet its plan 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 Reserve 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 shall have a dated signed agreement in accordance with Requirement R4.
- M5.** Each Balancing Authority shall have evidence, such as a dated actual 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 their Regulating Reserve, Contingency Reserve and Frequency Responsive Reserve in compliance with Requirement R6.
- M7.** Each Balancing Authority shall have evidence, such as a dated actual 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**

The Regional Entity is the Compliance Enforcement Authority except where the responsible entity works for the Regional Entity. Where the responsible entity works for the Regional Entity, the Regional Entity will establish an agreement with the ERO or another entity approved by the ERO and FERC (i.e. another Regional Entity), to be responsible for compliance enforcement.

**1.2. Data Retention**

The Balancing Authority or Reserve sharing Group shall retain data or evidence to show compliance 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 or Reserve Sharing Group is found non-compliant, it shall keep information related to the non-compliance 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 Violation Investigations
- Self-Reporting
- Complaints
- Periodic Data Submittals

**1.4. Additional Compliance Information**

None.

**2. Violation Severity Levels**

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1				
R2				
R3				
R4				

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R5				
R6				
R7				

### E. Regional Variances

None.

### F. Associated Documents

BAL-012-0 Operating Reserve Planning Background Document

### Version History

Version	Date	Action	Change Tracking
0		NERC BOT Adoption	New Standard