

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.
8. The draft standard was posted for 30-day formal industry comment period from June 4, 2012 through July 3, 2012

Proposed Action Plan and Description of Current Draft:

This is the second posting of the proposed new standard. This proposed draft standard will be posted for a 45-day formal comment period beginning on March 21, 2013 through April 25, 2013.

Future Development Plan:

Anticipated Actions	Anticipated Date
1. Second posting	March/April 2013
2. Initial Ballot	April 2013
3. Recirculation Ballot	October 2013
4. NERC BOT adoption.	November 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.

Balancing Contingency Event: Any single event described in Subsections (A), (B), or (C) below, or any series of such otherwise single events, with each separated from the next by less than one minute.

A. Sudden Loss of ~~g~~Generation:

a. Due to

- i. Unit tripping,
- ii. Loss of generator Interconnection Facility~~ies~~ resulting in isolation of the generator from the Bulk Electric System or from the responsible entity's electric system, or
- iii. Sudden unplanned outage of transmission Facility~~ies~~;

b. And, that causes an unexpected change to the responsible entity's ACE;

~~c. Provided, however, that normal, recurring operating characteristics of a unit do not constitute sudden or unanticipated losses and may not be subject to this definition.~~

~~B. Sudden Loss of an Non-Interruptible Import; due to forced outage of transmission equipment that causes an unexpected change to the responsible entity's ACE.~~

~~a.B. A sudden loss of a non-interruptible import, due to forced outage of transmission equipment that causes an unexpected change to the responsible entity's ACE.~~

~~C. Sudden loss of a known load used as a resource that causes an unexpected change to the responsible entity's ACE. Unexpected Failure of Generation to Maintain or Increase:~~

~~a. Due to~~

- ~~i. Inability to start a unit the responsible entity planned to bring online at that time (for reasons other than lack of fuel), or~~
- ~~ii. Internal plant equipment problems that force the generator to be ramped down or taken offline;~~

~~b.C. And that, even if not an immediate cause of an unexpected change to the responsible entity's ACE, will, in the responsible entity's judgment, leave the responsible entity unable to maintain its ACE following the failure, unless it deploys Contingency Reserve.~~

Most Severe Single Contingency (MSSC): The Balancing Contingency Event, due to a single contingency, that would result in the greatest loss (measured in MW) of resource generation output used by the Reserve Sharing Group (RSG) or a Balancing Authority that is not participating as a member of a RSG at the time of the event, ~~or the greatest loss of activated Direct Control Load Management used by the Balancing Authority~~, to meet firm system load

and ~~non-interruptible~~ export obligation (excluding export obligation for which Contingency Reserve obligations are being met by the sink Balancing Authority).

Reportable Balancing Contingency Event: Any Balancing Contingency Event resulting in a loss of MW output greater than or equal to the lesser amount of 80 percent of the Balancing Authority's Most Severe Single Contingency or 500 MW and occurring within a rolling one-minute interval based on EMS scan rate data. The 80% threshold may be reduced upon written notification to the Regional Entity.

Contingency Event Recovery Period: A period beginning at the time that the resource output begins to decline within the first one-minute interval that defines a Balancing Contingency Event, and extends for fifteen minutes thereafter not exceeding 15 minutes following the start of the Balancing Contingency Event. ~~The start of the Balancing Contingency Event is the point in time where the first change in MW is observed due to the event.~~

Contingency Reserve Restoration Period: A period not exceeding 90 minutes following the end of the Contingency Event Recovery Period, ~~during which the amount of Contingency Reserve deployed to recover from a Balancing Contingency Event is to be restored.~~

Pre-Reportable Contingency Event ACE Value: The average value of ACE in the 16 second interval immediately prior to the start of the Reportable Contingency Event Recovery Period based on EMS scan rate data ~~when there are no previous Reportable Contingency Events for which the Contingency Event Recovery Period is not yet completed,~~

or

~~The value of ACE that the Balancing Authority or Reserve Sharing Group must attain to fully meet its ACE recovery requirement with respect to the immediately previous Reportable Contingency Event for which the Contingency Event Recovery Period is not yet completed.~~

Reserve Sharing Group Reporting ACE: At any given time of measurement for the applicable Reserve Sharing Group, the algebraic sum of the ACEs (as calculated at such time of measurement) of all of the Balancing Authorities that make up the Reserve Sharing Group.

Contingency Reserve: The provision of capacity that may be deployed by the Balancing Authority to respond to a Balancing Contingency Event ~~meet the Disturbance Control Standard (DCS)~~ and other ~~NERC and Regional Reliability Organization~~ contingency requirements (such as Energy Emergency Alerts Level 2 or Level 3). The capacity may be provided by resources such as Demand Side Management (DSM), Interruptible Load and unloaded generation.

A. Introduction

1. **Title:** Contingency Reserve for Recovery From a Balancing Contingency Event
2. **Number:** BAL-002-2
3. **Purpose:** To ensure the Balancing Authority or Reserve Sharing Group ~~utilizes its Contingency Reserve to~~ balances resources and demand and returns the Balancing Authority's or Reserve Sharing Group's Area Control Error to defined values (subject to applicable limits) following a Reportable Balancing Contingency Event.
4. **Applicability:**

Applicability is determined on an individual event basis, but this standard does not apply to a Responsible Entity during periods when the Responsible Entity is in Energy Emergency Alert Level 2 or Level 3.

4.1. Balancing Authority

- 4.1.1 A Balancing Authority that is a member of a Reserve Sharing Group is the Responsible Entity only in periods during which the Balancing Authority is not in active status under the applicable agreement or governing rules for the Reserve Sharing Group.

4.2. Reserve Sharing Group

5. **(Proposed) Effective Date:**

- 5.1. First day of the first calendar quarter that is six 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 six 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. Except when an Energy Emergency Alert Level 2 or Level 3 is in effect, the Responsible Entity~~Each Balancing Authority or Reserve Sharing Group~~ experiencing a Reportable Balancing Contingency Event shall ~~implement its Contingency Reserve plan so that the Balancing Authority or Reserve Sharing Group can~~ demonstrate that within the Contingency Event Recovery Period the Responsible Entity returned its ACE to~~within the Contingency Event Recovery Period:~~ [*Violation Risk Factor: Medium*][*Time Horizon: Real-time Operations*]
 - Zero, (if its Pre-Reportable Contingency Event ACE Value was positive or equal to zero)~~The Balancing Authority or Reserve Sharing Group returned its ACE to:~~
 - ~~Zero,~~ less the sum of the magnitudes of all subsequent Balancing Contingency Events that occur within the Contingency Event Recovery Period, and if its ACE just prior to the Reportable Contingency Event was positive or equal to zero, Or

- ~~Further reduced by the Its Pre-Reportable Contingency Event ACE Value, less the sum of the magnitudes of the difference between (i) the Responsible Entity's Most Severe Single Contingency (MSSC) and (ii) the sum of the magnitudes of the Reportable all subsequent Balancing Contingency Events and all previous Balancing Contingency Events that have not completed their that occur within the Contingency Event Restoration/Recovery Period when the sum referenced in clause (ii) of this bullet is greater than MSSC, if its ACE just prior to the Reportable Contingency Event was negative.~~

Or,

- Its Pre-Reportable Contingency Event ACE Value, (if its Pre-Reportable Contingency Event ACE Value was negative),
 - less the sum of the magnitudes of all subsequent Balancing Contingency Events that occur within the Contingency Event Recovery Period, and
 - Further reduced by the magnitude of the difference between (i) the Responsible Entity's Most Severe Single Contingency (MSSC) and (ii) the sum of the magnitudes of the Reportable Balancing Contingency Event and all previous Balancing Contingency Events that have not completed their Contingency Event Restoration Period when the sum referenced in clause (ii) of this bullet is greater than MSSC. Provided, however, that in either of the foregoing cases, if the Reportable Contingency Event (individually or when combined with any previous Balancing Contingency Events that have not completed their Contingency Reserve Restoration Periods) exceeded the Balancing Authority's or Reserve Sharing Group's Most Severe Single Contingency (MSSC), then the Balancing Authority or Reserve Sharing Group need only demonstrate ACE recovery of at least equal to its MSSC, less the sum of the magnitudes of all Previous Balancing Contingency Events that have not completed their Contingency Reserve Restoration Periods.

R2. Except during the Disturbance Recovery Period and Contingency Reserve Recovery Period, or during an Energy Emergency Alert Level 2 or 3, each Responsible Entity shall maintain an amount of Contingency Reserve at least equal to its Most Severe Single Contingency. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]

C. Measures

M1. Each Responsible Entity shall have, and provide upon request, as evidence, a CR Form 1 with date and time of occurrence to show compliance with Requirement R1, including additional documentation on any Balancing Contingency Event that has not completed its Contingency Reserve Restoration Period and that is used to reduce the recovery to the amount limited by MSSC. Each Balancing Authority or Reserve Sharing Group shall have, and provide upon request, evidence; such as computer

~~logs or operator logs, with date and time of occurrence to show compliance with Requirement R1.~~

M2. Each Responsible Entity shall have dated documentation that demonstrates its Contingency Reserve, averaged over each Clock Hour, was maintained in accordance with the amounts identified in Requirement R2 except within the first 105 minutes following an event requiring the activation of Contingency Reserve.

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

~~The As defined in the NERC Rules of Procedure, “Compliance Enforcement Authority” means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards. 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 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 Responsible Entity~~Balancing Authority or Reserve Sharing Group~~ shall retain data or evidence to show compliance for the current year, plus three previous 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 Responsible Entity~~Balancing Authority or Reserve 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

~~A Balancing Authority may elect to fulfill its Contingency Reserve obligations by participating as a member of a Reserve Sharing Group.~~

~~The Responsible Entity~~~~A Balancing Authority or Reserve Sharing Group~~ may use Contingency Reserve for any Balancing Contingency Event and as required for any other applicable standards.

~~A Balancing Authority or Reserve Sharing Group may optionally reduce the 80 percent threshold, upon written notification to the Regional Entity.~~~~A Responsible Entity is not subject to compliance with this standard in any period during which the Responsible Entity is in an Energy Emergency Alert Level 2 or Level 3.~~

2. Violation Severity Levels

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
<u>R1</u>	<u>The Responsible Entity recovered from a Reportable Balancing Contingency Event during the Contingency Event Recovery Period but recovered less than 100% but more than 90% of required recovery.</u>	<u>The Responsible Entity recovered from a Reportable Balancing Contingency Event during the Contingency Event Recovery Period but recovered 90% or less but more than 80% of required recovery.</u>	<u>The Responsible Entity recovered from a Reportable Balancing Contingency Event during the Contingency Event Recovery Period but recovered 80% or less but more than 70% of required recovery.</u>	<u>The Responsible Entity recovered from a Reportable Balancing Contingency Event during the Contingency Event Recovery Period but recovered 70% or less of required recovery.</u>
<u>R2</u>	<u>In each calendar quarter, the Responsible Entity had Contingency Reserves but its</u>	<u>In each calendar quarter, the Responsible Entity had Contingency Reserves but its</u>	<u>In each calendar quarter, the Responsible Entity had Contingency Reserves but its</u>	<u>In each calendar quarter, the Responsible Entity had Contingency Reserves but its</u>

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	<u>Contingency Reserve was deficient for more than 5 hours but less than or equal to 15 hours.</u>	<u>Contingency Reserve was deficient for more than 15 hours but less than or equal to 25 hours.</u>	<u>Contingency Reserve was deficient for more than 25 hours but less than or equal to 35 hours.</u>	<u>Contingency Reserve was deficient for more than 35 hours.</u>
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E. Regional Variances

None.

F. Associated Documents

BAL-002-2 Contingency Reserve for Recovery from a Balancing Contingency Event
Background Document

[CR Form 1](#)

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
0	February 14, 2006	Revised graph on page 3, “10 min.” to “Recovery time.” Removed fourth bullet.	Errata
2		NERC BOT Adoption	Complete revision