

# Reliability Standard Audit Worksheet<sup>1</sup>

## BAL-002-2 – Disturbance Control Performance - Contingency Reserve for Recovery from a Balancing Contingency Event

*This section to be completed by the Compliance Enforcement Authority.*

**Audit ID:** Audit ID if available; or REG-NCRnnnnn-YYYYMMDD  
**Registered Entity:** Registered name of entity being audited  
**NCR Number:** NCRnnnnn  
**Compliance Enforcement Authority:** Region or NERC performing audit  
**Compliance Assessment Date(s)<sup>2</sup>:** Month DD, YYYY, to Month DD, YYYY  
**Compliance Monitoring Method:** [On-site Audit | Off-site Audit | Spot Check]  
**Names of Auditors:** Supplied by CEA

### Applicability of Requirements

	BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	RSG	TO	TOP	TP	TSP
R1	X <sup>3</sup>										X				
R2	X <sup>3</sup>										X				
R3	X <sup>3</sup>										X				

### Legend:

Text with blue background:	Fixed text – do not edit
Text entry area with Green background:	Entity-supplied information
Text entry area with white background:	Auditor-supplied information

<sup>1</sup> NERC developed this Reliability Standard Audit Worksheet (RSAW) language in order to facilitate NERC’s and the Regional Entities’ assessment of a registered entity’s compliance with this Reliability Standard. The NERC RSAW language is written to specific versions of each NERC Reliability Standard. Entities using this RSAW should choose the version of the RSAW applicable to the Reliability Standard being assessed. While the information included in this RSAW provides some of the methodology that NERC has elected to use to assess compliance with the requirements of the Reliability Standard, this document should not be treated as a substitute for the Reliability Standard or viewed as additional Reliability Standard requirements. In all cases, the Regional Entity should rely on the language contained in the Reliability Standard itself, and not on the language contained in this RSAW, to determine compliance with the Reliability Standard. NERC’s Reliability Standards can be found on NERC’s website. Additionally, NERC Reliability Standards are updated frequently, and this RSAW may not necessarily be updated with the same frequency. Therefore, it is imperative that entities treat this RSAW as a reference document only, and not as a substitute or replacement for the Reliability Standard. It is the responsibility of the registered entity to verify its compliance with the latest approved version of the Reliability Standards, by the applicable governmental authority, relevant to its registration status.

The NERC RSAW language contained within this document provides a non-exclusive list, for informational purposes only, of examples of the types of evidence a registered entity may produce or may be asked to produce to demonstrate compliance with the Reliability Standard. A registered entity’s adherence to the examples contained within this RSAW does not necessarily constitute compliance with the applicable Reliability Standard, and NERC and the Regional Entity using this RSAW reserves the right to request additional evidence from the registered entity that is not included in this RSAW. Additionally, this RSAW includes excerpts from FERC Orders and other regulatory references. The FERC Order cites are provided for ease of reference only, and this document does not necessarily include all applicable Order provisions. In the event of a discrepancy between FERC Orders, and the language included in this document, FERC Orders shall prevail.

<sup>2</sup> Compliance Assessment Date(s): The date(s) the actual compliance assessment (on-site audit, off-site spot check, etc.) occurs.

<sup>3</sup> 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.

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**Findings**

**(This section to be completed by the Compliance Enforcement Authority)**

Req.	Finding	Summary and Documentation	Functions Monitored
R1			
R2			
R3			

Req.	Areas of Concern

Req.	Recommendations

Req.	Positive Observations

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**Subject Matter Experts**

Identify the Subject Matter Expert(s) responsible for this Reliability Standard.

**Registered Entity Response (Required; Insert additional rows if needed):**

SME Name	Title	Organization	Requirement(s)

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**R1 Supporting Evidence and Documentation**

**R1.** The Responsible Entity experiencing a Reportable Balancing Contingency Event shall:

**1.1.** within the Contingency Event Recovery Period, demonstrate recovery by returning its Reporting ACE to at least the recovery value of:

- zero (if its Pre-Reporting Contingency Event ACE Value was positive or equal to zero); however, any Balancing Contingency Event that occurs during the Contingency Event Recovery Period shall reduce the required recovery: (i) beginning at the time of, and (ii) by the magnitude of, such individual Balancing Contingency Event,

or,

- its Pre-Reporting Contingency Event ACE Value (if its Pre-Reporting Contingency Event ACE Value was negative); however, any Balancing Contingency Event that occurs during the Contingency Event Recovery Period shall reduce the required recovery: (i) beginning at the time of, and (ii) by the magnitude of, such individual Balancing Contingency Event.

**1.2.** document all Reportable Balancing Contingency Events using CR Form 1.

**1.3.** deploy Contingency Reserve, within system constraints, to respond to all Reportable Balancing Contingency Events, however, it is not subject to compliance with Requirement R1 part 1.1 if:

**1.3.1** the Responsible Entity:

- is a Balancing Authority experiencing a Reliability Coordinator declared Energy Emergency Alert Level or is a Reserve Sharing Group whose member, or members, are experiencing a Reliability Coordinator declared Energy Emergency Alert level, and
- is utilizing its Contingency Reserve to mitigate an operating emergency in accordance with its emergency Operating Plan, and
- has depleted its Contingency Reserve to a level below its Most Severe Single Contingency

or,

**1.3.2** the Responsible Entity experiences:

- multiple Contingencies where the combined MW loss exceeds its Most Severe Single Contingency and that are defined as a single Balancing Contingency Event, or
- multiple Balancing Contingency Events within the sum of the time periods defined by the Contingency Event Recovery Period and Contingency Reserve Restoration Period whose combined magnitude exceeds the Responsible Entity's Most Severe Single Contingency.

**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. If Requirement R1 part 1.3

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applies, then dated documentation that demonstrates compliance with Requirement R1 part 1.3 must also be provided.

**Registered Entity Response (Required):**

**Question:** Has the entity experienced any Reportable Balancing Contingency Events during the compliance monitoring period?      Yes    No

[If Yes, identify those events as described in the Evidence Requested section below and proceed to the Compliance Narrative section below. If No, proceed to the Compliance Narrative section below.]

[Note: A separate spreadsheet or other document may be used. If so, provide the document reference below.]

**Registered Entity Response (Required):**

**Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

**Evidence Requested<sup>1</sup>:**

<b>Provide the following evidence, or other evidence to demonstrate compliance.</b>
(R1) Provide a list of all Reportable Balancing Contingency Event(s) experienced during the compliance monitoring period.
(Part 1.2) Provide a CR Form 1 with date and time of occurrence for each Reportable Balancing Contingency Event experienced during the compliance monitoring period.
(Part 1.3) Provide dated documentation for all Reportable Balancing Contingency Event(s) where the entity did not recover within the Contingency Event Recovery Period, demonstrating that it deployed Contingency Reserves, within system constraints, to respond to the Reportable Balancing Contingency Event(s) and the applicable component(s) of Part 1.3.1 or Part 1.3.2.

**Registered Entity Evidence (Required):**

<b>The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.</b>					
<b>File Name</b>	<b>Document Title</b>	<b>Revision or Version</b>	<b>Document Date</b>	<b>Relevant Page(s) or Section(s)</b>	<b>Description of Applicability of Document</b>

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**Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):**


**Compliance Assessment Approach Specific to BAL-002-2, R1**

*This section to be completed by the Compliance Enforcement Authority*

	(R1 and Part 1.1) For all, or a sample of, Reportable Balancing Contingency Event(s), review the CR Form 1 for each to validate the entity recovered within the Contingency Event Recovery Period by returning its Reporting ACE to at least the recovery value of Zero (if its Pre-Reporting Contingency Event ACE Value was positive or equal to zero), or its Pre-Reporting Contingency Event ACE Value (if its Pre-Reporting Contingency Event ACE Value was negative). If the entity did not recover, verify that the exception was appropriate per Requirement R1 Part 1.3.
	(Part 1.2) Review the list of all Reportable Balancing Contingency Events experienced during the compliance monitoring period and verify that all reportable events are documented on a CR Form 1.
<b>Note to Auditor:</b> See newly defined or revised terms associated with BAL-002-2 in the Additional Information section of this RSAW.  When sampling applicable Events for audit testing, auditors may consider various sources for selecting sample items. Where risk is higher, auditors should use their knowledge and experience to learn of applicable Events for the entity and then verify, on a sample basis, that the entity responded to such events in accordance with Requirement R1. Possible sources of events include CR Form 1 documents, communications with Event Reporting staff at the Regional Entities and NERC, and knowledge acquired through compliance monitoring procedures the auditor applied to other entities.	

**Auditor Notes:**

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**R2 Supporting Evidence and Documentation**

- R2.** Each Responsible Entity shall develop, review and maintain annually, and implement an Operating Process as part of its Operating Plan to determine its Most Severe Single Contingency and make preparations to have Contingency Reserve equal to, or greater than the Responsible Entity’s Most Severe Single Contingency available for maintaining system reliability.
- M2.** Each Responsible Entity will have the following documentation to show compliance with Requirement R2:
- a dated Operating Process;
  - evidence to indicate that the Operating Process has been reviewed and maintained annually; and,
  - evidence such as Operating Plans or other operator documentation that demonstrate that the entity determines its Most Severe Single Contingency and that Contingency Reserves equal to or greater than its Most Severe Single Contingency are included in this process.

**Registered Entity Response (Required):**

**Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

**Evidence Requested:**

<b>Provide the following evidence, or other evidence to demonstrate compliance.</b>
Provide a dated Operating Process and evidence that the Operating Process has been reviewed and maintained annually.
Provide evidence, such as Operating Plans or operator documentation, that the entity determines its Most Severe Single Contingency and that preparations to have Contingency Reserves equal to or greater than its Most Severe Single Contingency were included in the Operating Process.

**Registered Entity Evidence (Required):**

**The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.**

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

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**Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):**


**Compliance Assessment Approach Specific to BAL-002-2, R2**

***This section to be completed by the Compliance Enforcement Authority***

	Review the evidence and verify that the dated Operating Process has been reviewed and maintained annually.
	Review the evidence and verify that the entity determines its Most Severe Single Contingency.
	Review the evidence and verify that the entity planned for Contingency Reserves equal to, or greater than its Most Severe Single Contingency.

**Note to Auditor:**

**Auditor Notes:**

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**R3 Supporting Evidence and Documentation**

**R3.** Each Responsible Entity, following a Reportable Balancing Contingency Event, shall restore its Contingency Reserve to at least its Most Severe Single Contingency, before the end of the Contingency Reserve Restoration Period, but any Balancing Contingency Event that occurs before the end of a Contingency Reserve Restoration Period resets the beginning of the Contingency Event Recovery Period.

**M3.** Each Responsible Entity will have documentation demonstrating its Contingency Reserve was restored within the Contingency Reserve Restoration Period, such as historical data, computer logs or operator logs.

**Registered Entity Response (Required):**

**Question:** Has the entity experienced a Reportable Balancing Contingency Event within the compliance monitoring period?       Yes    No

[If Yes, identify those events and proceed to the Compliance Narrative section below. If No, proceed to the Compliance Narrative section below.]

[Note: A separate spreadsheet or other document may be used. If so, provide the document reference below.]

**Registered Entity Response (Required):**

**Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

**Evidence Requested:**

<b>Provide the following evidence, or other evidence to demonstrate compliance.</b>
For all, or an auditor selected sample of, Reportable Balancing Contingency Events that occurred over the compliance monitoring period, provide dated and time-stamped evidence, such as historical data, computer or operator logs, that the entity's Contingency Reserve was restored within the Contingency Reserve Restoration Period.

**Registered Entity Evidence (Required):**

**The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.**

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s)	Description of Applicability of Document
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				or Section(s)	

**Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):**


**Compliance Assessment Approach Specific to BAL-002-2, R3**

*This section to be completed by the Compliance Enforcement Authority*

	For all, or a sample of Reportable Balancing Contingency Events that occurred over the compliance monitoring period, review the dated and time-stamped documentation provided to validate that the Responsible Entity restored its Contingency Reserve within the Contingency Reserve Restoration Period.
	<b>Note to Auditor:</b> If the entity experienced a Balancing Contingency Event prior to the end a Contingency Reserve Restoration Period, the Contingency Event Recovery Period would be reset.

**Auditor Notes:**

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**Additional Information:**

**Reliability Standard**

To be inserted by RSAW developer prior to posting of this RSAW associated with the enforceable date of this Reliability Standard.

**Sampling Methodology**

To be inserted by RSAW developer prior to posting of this RSAW associated with the enforceable date of this Reliability Standard, if applicable.

**Regulatory Language**

To be inserted by NERC Legal prior to posting of this RSAW associated with the enforceable date of this Reliability Standard.

**Selected Glossary Terms**

The following Glossary terms are provided for convenience only. Please refer to the NERC web site for the current enforceable terms.

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 one minute or less.

- A. Sudden loss of generation:
  - a. Due to
    - i. unit tripping,
    - ii. loss of generator Facility 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;
  - b. And, that causes an unexpected change to the responsible entity's ACE;
- B. Sudden loss of an import, due to unplanned outage of transmission equipment that causes an unexpected imbalance between generation and Demand on the Interconnection.
- C. Sudden restoration of a Demand that was used as a resource that causes an unexpected change to the responsible entity's ACE.

**Most Severe Single Contingency (MSSC):** The Balancing Contingency Event, due to a single contingency identified using system models maintained within the Reserve Sharing Group (RSG), or a Balancing Authority's area that is not part of a Reserve Sharing Group, that would result in the greatest loss (measured in MW) of resource output used by the RSG or a Balancing Authority that is not participating as a member of a RSG at the time of the event to meet Firm Demand and 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 occurring within a one-minute interval of an initial sudden decline in ACE based on EMS scan rate data that results in a loss of MW output less than or equal to the Most Severe Single Contingency, and greater than or equal to the lesser amount of: (i) 80% of the Most Severe Single

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Contingency, or (ii) the amount listed below for the applicable Interconnection. Prior to any given calendar quarter, the 80% threshold may be reduced by the responsible entity upon written notification to the Regional Entity.

- Eastern Interconnection - 900 MW
- Western Interconnection – 500 MW
- ERCOT – 800 MW
- Quebec – 500 MW

**Contingency Event Recovery Period:** A period that begins at the time that the resource output begins to decline within the first one-minute interval of a Reportable Balancing Contingency Event, and extends for fifteen minutes thereafter.

**Contingency Reserve Restoration Period:** A period not exceeding 90 minutes following the end of the Contingency Event Recovery Period.

**Pre-Reporting Contingency Event ACE Value:** The average value of Reporting ACE, or Reserve Sharing Group Reporting ACE when applicable, in the 16-second interval immediately prior to the start of the Contingency Event Recovery Period based on EMS scan rate data.

**Reserve Sharing Group Reporting ACE:** At any given time of measurement for the applicable Reserve Sharing Group, the algebraic sum of the ACEs (or equivalent as calculated at such time of measurement) of the Balancing Authorities participating in the Reserve Sharing Group at the time of measurement.

**Contingency Reserve:** The provision of capacity that may be deployed by the Balancing Authority to respond to a Balancing Contingency Event and other contingency requirements (such as Energy Emergency Alerts as specified in the associated EOP standard). A Balancing Authority may include in its restoration of Contingency Reserve readiness to reduce Firm Demand and include it if, and only if, the Balancing Authority:

- is experiencing a Reliability Coordinator declared Energy Emergency Alert level, and
  - is utilizing its Contingency Reserve to mitigate an operating emergency in accordance with its emergency Operating Plan.
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### Revision History for RSAW

Version	Date	Reviewers	Revision Description
1	09/08/2014	NERC Compliance, NERC Standards, RSAWTF	New Document
2	02/11/2015	NERC Compliance	Revised RSAW to align with revised Reliability Standard – Posting 6 January 2015
3	07/09/2015	NERC Compliance Assurance	Revised RSAW to align with revised Reliability Standard – Posting 7 July 2015
4	10/02/2015	NERC Compliance Assurance, RSAWTF	Revised RSAW to align with revised Reliability Standard – Posting 29 September 2015

<sup>i</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.