

Reliability Standard Audit Worksheet¹

EOP-008-2 – Loss of Control Center Functionality

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)²: Month DD, YYYY, to Month DD, YYYY
Compliance Monitoring Method: Audit
Names of Auditors: Supplied by CEA

Applicability of Requirements

	BA	DP	GO	GOP	IA	LSE	PA	RC	RP	RSG	TO	TOP	TP	TSP
R1	X							X				X		
R2	X							X				X		
R3								X						
R4	X											X		
R5	X							X				X		
R6	X							X				X		
R7	X							X				X		
R8	X							X				X		

¹ 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.

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

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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			
R4			
R5			
R6			
R7			
R8			

Req.	Areas of Concern

Req.	Recommendations

Req.	Positive Observations

Subject Matter Experts

Identify Subject Matter Expert(s) responsible for this Reliability Standard. (Insert additional rows if necessary)

Registered Entity Response (Required):

SME Name	Title	Organization	Requirement(s)

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R1 Supporting Evidence and Documentation

- R1.** Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a current Operating Plan describing the manner in which it continues to meet its functional obligations with regard to the reliable operations of the BES in the event that its primary control center functionality is lost. This Operating Plan for backup functionality shall include:
- 1.1.** The location and method of implementation for providing backup functionality.
 - 1.2.** A summary description of the elements required to support the backup functionality. These elements shall include:
 - 1.2.1.** Tools and applications to ensure that System Operators have situational awareness of the BES.
 - 1.2.2.** Data communications.
 - 1.2.3.** Interpersonal Communications.
 - 1.2.4.** Power source(s).
 - 1.2.5.** Physical and cyber security.
 - 1.3.** An Operating Process for keeping the backup functionality consistent with the primary control center.
 - 1.4.** Operating Procedures, including decision authority, for use in determining when to implement the Operating Plan for backup functionality.
 - 1.5.** A transition period between the loss of primary control center functionality and the time to fully implement the backup functionality that is less than or equal to two hours.
 - 1.6.** An Operating Process describing the actions to be taken during the transition period between the loss of primary control center functionality and the time to fully implement backup functionality elements identified in Requirement R1, Part 1.2. The Operating Process shall include:
 - 1.6.1.** A list of all entities to notify when there is a change in operating locations.
 - 1.6.2.** Actions to manage the risk to the BES during the transition from primary to backup functionality, as well as during outages of the primary or backup functionality.
 - 1.6.3.** Identification of the roles for personnel involved during the initiation and implementation of the Operating Plan for backup functionality.
- M1.** Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a dated, current, and in effect Operating Plan for backup functionality in accordance with Requirement R1, in electronic or hardcopy format.

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.

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Evidence Requested¹:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated, current, and in effect Operating Plan for backup functionality in electronic or hardcopy format

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

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

Compliance Assessment Approach Specific to EOP-008-2, R1

This section to be completed by the Compliance Enforcement Authority

	Verify that the Operating Plans for backup functionality specifically address each one of the following elements:
	(Part 1.1) The location and method of implementation for providing backup functionality.
	(Part 1.2) A summary description of the elements required to support the backup functionality. These elements shall include:
	(Part 1.2.1) Tools and applications to ensure that System Operators have situational awareness of the BES.
	(Part 1.2.2) Data communications.
	(Part 1.2.3) Interpersonal Communications.
	(Part 1.2.4) Power source(s).
	(Part 1.2.5) Physical and cyber security.
	(Part 1.3) An Operating Process for keeping the backup functionality consistent with the primary control center.
	(Part 1.4) Operating Procedures, including decision authority, for use in determining when to implement the Operating Plan for backup functionality.
	(Part 1.5) Verify the transition period between the loss of primary control center functionality and the time to fully implement the backup functionality is less than or equal to two hours.
	(Part 1.6) An Operating Process that includes:
	(Part 1.6) Description of the actions to be taken during the transition period between the loss of primary

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	control center functionality and the time to fully implement backup functionality elements identified in Requirement R1, Part 1.2.
	(Part 1.6.1) A list of all entities to notify when there is a change in operating locations.
	(Part 1.6.2) Actions to manage the risk to the BES during the transition from primary to backup functionality as well as during outages of the primary or backup functionality.
	(Part 1.6.3) Identification of the roles for personnel involved during the initiation and implementation of the Operating Plan for backup functionality.
Note to Auditor:	

Auditor Notes:

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R2 Supporting Evidence and Documentation

- R2.** Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a copy of its current Operating Plan for backup functionality available at its primary control center and at the location providing backup functionality.

- M2.** Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a dated, current, and in effect copy of its Operating Plan for backup functionality in accordance with Requirement R2, in electronic or hardcopy format, available at its primary control center and at the location providing backup functionality.

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:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated, current, and in effect copy of the entity's Operating Plan for backup functionality
Location of the entity's primary control center and the location providing backup functionality

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

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

Compliance Assessment Approach Specific to EOP-008-2, R2

This section to be completed by the Compliance Enforcement Authority

	Verify that a current set of the entities backup functionality Operating Plan is available at both the primary control center and the backup facility location.
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Note to Auditor:

Auditor Notes:

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R3 Supporting Evidence and Documentation

- R3.** Each Reliability Coordinator shall have a backup control center facility (provided through its own dedicated backup facility or at another entity’s control center staffed with certified Reliability Coordinator operators when control has been transferred to the backup facility) that provides the functionality required for maintaining compliance with all Reliability Standards that depend on primary control center functionality. To avoid requiring a tertiary facility, a backup facility is not required during:
- Planned outages of the primary or backup facilities of two weeks or less
 - Unplanned outages of the primary or backup facilities
- M3.** Each Reliability Coordinator shall provide dated evidence that it has a backup control center facility (provided through its own dedicated backup facility or at another entity’s control center staffed with certified Reliability Coordinator operators when control has been transferred to the backup facility) that provides the functionality required for maintaining compliance with all Reliability Standards that depend on primary control center functionality in accordance with Requirement R3.

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:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated evidence showing the entity has a backup control center facility

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

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

Compliance Assessment Approach Specific to EOP-008-2, R3

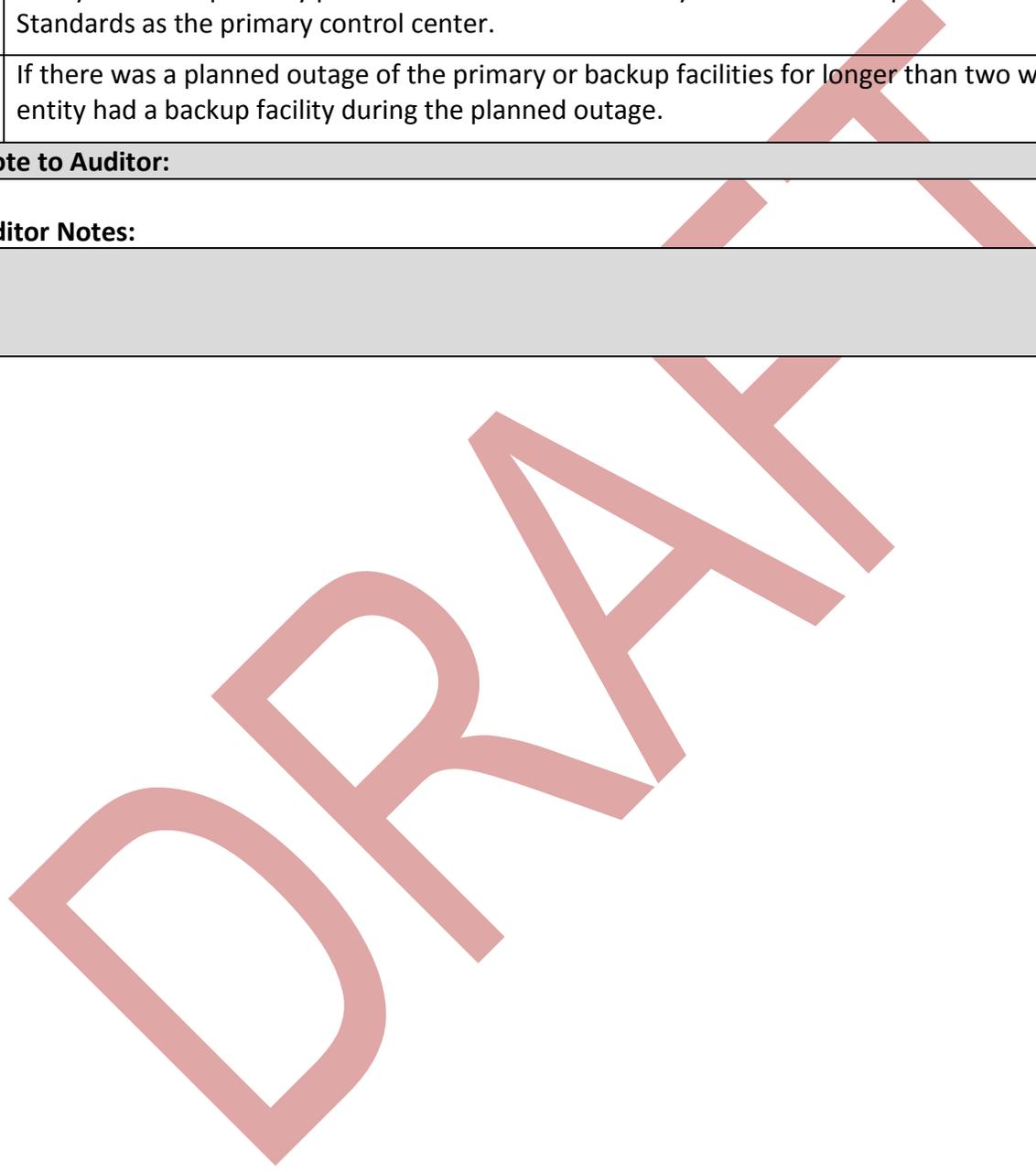
This section to be completed by the Compliance Enforcement Authority

	Verify that the entity has a backup control center (of its own, or at another entity's control center).
	Verify the backup control center is staffed by Reliability Coordinator certified operators when control has been transferred to the backup center.
	Verify the backup facility provides the same functionality to maintain compliance with the Reliability Standards as the primary control center.
	If there was a planned outage of the primary or backup facilities for longer than two weeks, verify the entity had a backup facility during the planned outage.

Note to Auditor:

Auditor Notes:

[Redacted area for Auditor Notes]



R4 Supporting Evidence and Documentation

R4. Each Balancing Authority and Transmission Operator shall have backup functionality (provided either through a facility or contracted services staffed by applicable certified operators when control has been transferred to the backup functionality location) that includes monitoring, control, logging, and alarming sufficient for maintaining compliance with all Reliability Standards that depend on a Balancing Authority and Transmission Operator’s primary control center functionality respectively. To avoid requiring tertiary functionality, backup functionality is not required during:

- Planned outages of the primary or backup facilities of two weeks or less
- Unplanned outages of the primary or backup facilities

M4. Each Balancing Authority and Transmission Operator shall provide dated evidence that its backup functionality (provided either through a facility or contracted services staffed by applicable certified operators when control has been transferred to the backup functionality location) includes monitoring, control, logging, and alarming sufficient for maintaining compliance with all Reliability Standards that depend on a Balancing Authority or Transmission Operator’s primary control center functionality respectively in accordance with Requirement R4.

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:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated evidence showing the entity has backup functionality

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

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

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Compliance Assessment Approach Specific to EOP-008-2, R4

This section to be completed by the Compliance Enforcement Authority

	Verify the entity's backup control center contains the functionality as listed below sufficient for maintaining compliance with all Reliability Standards that depend on primary control center functionality for reliability of the BES:
	Monitoring.
	Control.
	Logging.
	Alarming.
	If there was a planned outage of the primary or backup facilities for longer than two weeks, verify the entity had backup functionality during the planned outage.

Note to Auditor:

Auditor Notes:

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R5 Supporting Evidence and Documentation

- R5.** Each Reliability Coordinator, Balancing Authority, and Transmission Operator, shall review and approve its Operating Plan for backup functionality at least once every 15 calendar months.
 - 5.1.** An update and approval of the Operating Plan for backup functionality shall take place within sixty calendar days of any changes to any part of the Operating Plan described in Requirement R1.

- M5.** Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have evidence that its dated, current, and in effect Operating Plan for backup functionality, in electronic or hardcopy format, has been reviewed and approved at least once every 15 calendar months and that it has been updated within sixty calendar days of any changes to any part of the Operating Plan described in Requirement R1 in accordance with Requirement R5.

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:

Provide the following evidence, or other evidence to demonstrate compliance.
The entity's dated, current, and in effect Operating Plan for backup functionality, in electronic or hardcopy format

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

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

Compliance Assessment Approach Specific to EOP-008-2, R5

This section to be completed by the Compliance Enforcement Authority

	Verify the entity provided evidence that it reviewed, updated, and approved its backup functionality Operating Plan at least once every 15 calendar months.
	Verify that any updates and approvals of the Operating Plan took place within sixty days of any changes to the Operating Plan as described in R1.
Note to Auditor:	

Auditor Notes:

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R6 Supporting Evidence and Documentation

R6. Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have primary and backup functionality that do not depend on each other for the control center functionality required to maintain compliance with Reliability Standards.

M6. Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have dated evidence that its primary and backup functionality do not depend on each other for the control center functionality required to maintain compliance with Reliability Standards in accordance with Requirement R6.

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:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated evidence that its primary and backup functionality do not depend on each other for the control center functionality required to maintain compliance with Reliability Standards

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

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

Compliance Assessment Approach Specific to EOP-008-2, R6

This section to be completed by the Compliance Enforcement Authority

	Verify that the primary and backup functionality do not depend on each other for the control center functionality required to maintain compliance with Reliability Standards
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Note to Auditor: Possible evidence could include network block diagrams showing discreet communication paths.

Auditor Notes:

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R7 Supporting Evidence and Documentation

R7. Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall conduct a test of its Operating Plan at least once every 15 calendar months and shall document the results from such a test. This test shall demonstrate:

- 7.1. The transition time between the simulated loss of primary control center functionality and the time to fully implement the backup functionality.
- 7.2. The backup functionality for a minimum of two continuous hours.

M7. Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall provide evidence such as dated records, that it has completed and documented its test of its Operating Plan for backup functionality, in accordance with Requirement R7.

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:

Provide the following evidence, or other evidence to demonstrate compliance.
Evidence such as dated records, that the entity has completed and documented its test of its Operating Plan for backup functionality

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

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

Compliance Assessment Approach Specific to EOP-008-2, R7

This section to be completed by the Compliance Enforcement Authority

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	Verify the entity conducted a test of its Operating Plan at least once every 15 calendar months and documented the results.
	(Part 7.1) Verify the transition time was documented to identify the time from loss of functionality of the primary system and the time that the backup was fully functional.
	(Part 7.2) Verify the backup facility was operated for a minimum of two continuous hours during the test.
Note to Auditor:	

Auditor Notes:

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R8 Supporting Evidence and Documentation

R8. Each Reliability Coordinator, Balancing Authority, and Transmission Operator that has experienced a loss of its primary or backup functionality and that anticipates that the loss of primary or backup functionality will last for more than six calendar months shall provide a plan to its Regional Entity within six calendar months of the date when the functionality is lost, showing how it will re-establish primary or backup functionality.

M8. Each Reliability Coordinator, Balancing Authority, and Transmission Operator that has experienced a loss of their primary or backup functionality and that anticipates that the loss of primary or backup functionality will last for more than six calendar months shall provide evidence that a plan has been submitted to its Regional Entity within six calendar months of the date when the functionality is lost showing how it will re-establish primary or backup functionality in accordance with Requirement R8.

Registered Entity Response (Required):

Question: Has the Registered Entity experienced a loss of primary or backup control center functionality for longer than six calendar months or anticipated this loss will last for more than six calendar months? Yes
 No

Provide an explanation in the Compliance Narrative section.

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:

Provide the following evidence, or other evidence to demonstrate compliance.
If applicable, evidence that a plan has been submitted to the entity’s Regional Entity within six calendar months of the date when the functionality was lost showing how the entity will re-establish primary or backup functionality

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

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

Compliance Assessment Approach Specific to EOP-008-2, R8

This section to be completed by the Compliance Enforcement Authority

	Responded to the applicability Question and provided evidence of compliance if the response was yes.
	Verify the entity provided evidence to the Regional Entity of a plan detailing how it will re-establish primary or backup functionality within six calendar months of the date functionality is lost, for a loss of functionality anticipated to be six months or more.
Note to Auditor:	

Auditor Notes:

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Additional Information:

Reliability Standard

The full text of EOP-008-2 may be found on the NERC Web Site (www.nerc.com) under “Program Areas & Departments”, “Reliability Standards.”

In addition to the Reliability Standard, there is an applicable Implementation Plan available on the NERC Web Site.

In addition to the Reliability Standard, there is background information available on the NERC Web Site.

Capitalized terms in the Reliability Standard refer to terms in the NERC Glossary, which may be found on the NERC Web Site.

Sampling Methodology

Sampling is essential for auditing compliance with NERC Reliability Standards since it is not always possible or practical to test 100% of either the equipment, documentation, or both, associated with the full suite of enforceable standards. The Sampling Methodology Guidelines and Criteria (see NERC website), or sample guidelines, provided by the Electric Reliability Organization help to establish a minimum sample set for monitoring and enforcement uses in audits of NERC Reliability Standards.

Regulatory Language

Still needed. Order No. 749, 134 FERC ¶ 61,215 (2011)

Selected Glossary Terms

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

Demand: 1. The rate at which electric energy is delivered to or by a system or part of a system, generally expressed in kilowatts or megawatts, at a given instant or averaged over any designated interval of time.
2. The rate at which energy is being used by the customer.

Demand-Side Management: The term for all activities or programs undertaken by Load-Serving Entity or its customers to influence the amount or timing of electricity they use.

Net Energy for Load: Net Balancing Authority Area generation, plus energy received from other Balancing Authority Areas, less energy delivered to Balancing Authority Areas through interchange. It includes Balancing Authority Area losses but excludes energy required for storage at energy storage facilities.

Total Internal Demand: The Demand of a metered system, which includes the Firm Demand, plus any controllable and dispatchable DSM Load and the Load due to the energy losses incurred within the boundary of the metered system.

Revision History for RSAW

Version	Date	Reviewers	Revision Description
1	7/8/16	NERC Compliance Assurance, RSAW Task Force	New Document

ⁱ 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.