

Reliability Standard Audit Worksheet¹

PRC-026-1 – Relay Performance During Stable Power Swings

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: [On-site Audit | Off-site Audit | Spot Check]
Names of Auditors: Supplied by CEA

Applicability of Requirements *[RSAW developer to insert correct applicability]*

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

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			

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. Each Planning Coordinator shall, at least once each calendar year, identify each Element in its area that meets one or more of the following criteria and provide notification to the respective Generator Owner and Transmission Owner, if any:

Criteria:

1. Generator(s) where an angular stability constraint exists that is addressed by an operating limit or a Remedial Action Scheme (RAS) and those Elements terminating at the transmission switching station associated with the generator(s).
2. An Element that is monitored as part of a System Operating Limit (SOL) that has been established based on angular stability constraints identified in system planning or operating studies.
3. An Element that forms the boundary of an island due to angular instability within the most recent underfrequency load shedding (UFLS) assessment.
4. An Element identified in the most recent Planning Assessment where relay tripping occurs due to a stable or unstable power swing during a simulated disturbance.
5. An Element reported by the Generator Owner or Transmission Owner pursuant to Requirement R2 or Requirement R3, unless the Planning Coordinator determines the Element is no longer susceptible to power swings.

M1. Each Planning Coordinator shall have dated evidence that demonstrates identification and the respective notification of the Element(s), if any, which meet one or more of the criteria in Requirement R1. Evidence may include, but is not limited to, the following documentation: emails, facsimiles, records, reports, transmittals, lists, or spreadsheets.

Registered Entity Response (Required):

Question: Did the entity have any Element(s) (i.e., generator, transformer, or transmission line) that met one or more of the criteria of Requirement R1, within its area?

Yes

No If no, then no further auditing of the Requirement may be necessary.

Note to Auditor:

[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 Requestedⁱ:

Provide the following evidence, or other evidence to demonstrate compliance.

Dated documentation such as in Measure M1 (e.g., lists), within the compliance monitoring period, demonstrating the identification of Elements (i.e., generator, transformer, or transmission line), if any, that met one or more of the criteria of Requirement R1.

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For the identified Elements, dated documentation such as in Measure M1 (e.g., transmittals), within the compliance monitoring period, demonstrating that the respective Generator Owner or Transmission Owner was notified of the identified Element(s) that met one or more of the criteria in Requirement R1.

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 PRC-026-1, R1

This section to be completed by the Compliance Enforcement Authority

	Interview an entity representative to understand the entity’s process for identifying Elements that met one or more of the criteria of Requirement R1.
	Select all, or a sample, of the identified Elements that met one or more of the criteria of Requirement R1, of the selected Element(s), verify that notification the Element(s) was provided to the respective Generator Owner and Transmission Owner in each calendar year of the compliance monitoring period.

Note to Auditor: Auditors may use their professional judgment in selecting Elements for audit testing. In cases where an auditor may be aware of an Element that met one or more of the criteria of Requirement R1, but was not identified, the auditor should question why the Element was not identified.

Auditor Notes:

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R2 Supporting Evidence and Documentation

R2. Each Transmission Owner shall, within 30 calendar days of identifying an Element that meets either of the following criteria, provide notification of the Element to its Planning Coordinator:

Criteria:

1. An Element that trips due to a stable or unstable power swing during an actual system Disturbance due to the operation of its load-responsive protective relays.
2. An Element that forms the boundary of an island during an actual system Disturbance due to the operation of its load-responsive protective relays.

M2. Each Transmission Owner shall have dated evidence that demonstrates identification of the Element(s), if any, which meet either of the criteria in Requirement R2. Evidence may include, but is not limited to, the following documentation: emails, facsimiles, records, reports, transmittals, lists, or spreadsheets.

Registered Entity Response (Required):

Question: Did the entity have any Element(s) (i.e., generator, transformer, or transmission line) that met either of the criteria of Requirement R2?

Yes

No If no, then no further auditing of the Requirement may be necessary.

Note to Auditor: There is no requirement for the entity to conduct a review of its Protection System(s) operations because reviews are covered by other NERC Reliability Standards.

[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:

Provide the following evidence, or other evidence to demonstrate compliance.

Dated documentation such as in Measure M2 (e.g., lists), within the compliance monitoring period, demonstrating the identification of Elements (i.e., generator, transformer, or transmission line) that met either of the criteria of Requirement R2.

For the identified Elements, dated documentation such as in Measure M2 (e.g., transmittals), within the compliance monitoring period, demonstrating notification of the Element(s) that met either of the criteria of Requirement R2 to the Planning Coordinator.

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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 PRC-026-1, R2

This section to be completed by the Compliance Enforcement Authority

	Interview an entity representative to understand the entity’s process for identifying Elements that met either of the criteria of Requirement R2.
	Select all, or a sample, of the identified Elements that met either of the criteria of Requirement R2, of the selected Element(s), verify that notification the Element(s) was provided to the Planning Coordinator within 30 calendar days of identifying the Element within the compliance monitoring period.

Note to Auditor: Auditors may use their professional judgment in selecting identified Elements for audit testing. In cases where an auditor may be aware of an Element that met either of the criteria of Requirement R2, but was not identified, the auditor should question why the Element was not identified.

Auditor Notes:

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R3 Supporting Evidence and Documentation

R3. Each Generator Owner shall, within 30 calendar days of identifying an Element that meets the following criterion, provide notification of the Element to its Planning Coordinator:

Criterion:

1. An Element that trips due to a stable or unstable power swing during an actual system Disturbance due to the operation of its load-responsive protective relays.

M3. Each Transmission Owner shall have dated evidence that demonstrates identification of the Element(s), if any, which meets the criterion in Requirement R3. Evidence may include, but is not limited to, the following documentation: emails, facsimiles, records, reports, transmittals, lists, or spreadsheets.

Registered Entity Response (Required):

Question: Did the entity have any Element(s) (i.e., generator, transformer, or transmission line) that met the criterion of Requirement R3?

- Yes
- No If no, then no further auditing of the Requirement is necessary.

Note to Auditor: There is no requirement for the entity to conduct a review of its Protection System(s) operations because reviews are covered by other NERC Reliability Standards.

[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 Requested¹:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated documentation such as in Measure M3 (e.g., lists), within the compliance monitoring period, demonstrating the identification of Elements (i.e., generator, transformer, or transmission line) that met the criterion of Requirement R3.
For the identified Elements, dated documentation such as in Measure M3 (e.g., transmittals), within the compliance monitoring period, demonstrating notification of the Element(s) that met the criterion of Requirement R3 to the Planning Coordinator.

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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 PRC-026-1, R3

This section to be completed by the Compliance Enforcement Authority

	Interview an entity representative to understand the entity’s process for identifying Elements that met the criterion of Requirement R3.
	Select all, or a sample, of the identified Elements that met the criterion of Requirement R3, of the selected Element(s), verify that notification the Element(s) was provided to the Planning Coordinator within 30 calendar days of identifying the Element within the compliance monitoring period.
Note to Auditor: Auditors may use their professional judgment in selecting identified Elements for audit testing. In cases where an auditor may be aware of an Element that met either of the criterion of Requirement R3, but was not identified, the auditor should question why the Element was not identified.	

Auditor Notes:

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R4 Supporting Evidence and Documentation

- R4.** Each Generator Owner and Transmission Owner shall, within 12 full calendar months of receiving notification of an Element pursuant to Requirement R1 or within 12 full calendar months of identifying an Element pursuant to Requirement R2 or R3, evaluate each identified Element’s load-responsive protective relay(s) based on the PRC-026-1 – Attachment B Criteria where the evaluation has not been performed in the last three calendar years.
- M4.** Each Generator Owner and Transmission Owner shall have dated evidence that demonstrates the evaluation was performed according to Requirement R4. Evidence may include, but is not limited to, the following documentation: apparent impedance characteristic plots, email, design drawings, facsimiles, R-X plots, software output, records, reports, transmittals, lists, settings sheets, or spreadsheets.

Registered Entity Response (Required):

Question: Did the entity receive notification of any Element(s) pursuant to Requirements R1 or identify any Element(s) pursuant to Requirement R2 or R3?

- Yes
- No If no, then no further auditing of the Requirement may be necessary.

Note to Auditor:

[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 Requested¹:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated documentation such as in Measure M4 (e.g., lists), within the compliance monitoring period, of any identified Element(s) pursuant to Requirements R1, R2, and R3.
Dated documentation such as in Measure M4 (e.g., software output), within the compliance monitoring period, demonstrating the evaluation of the load-responsive protective relay(s) for each identified Element pursuant to Requirements R1, R2, and R3.

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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 PRC-026-1, R4

This section to be completed by the Compliance Enforcement Authority

	Interview an entity representative to understand the entity’s process for evaluating the load-responsive protective relay(s) for identified Elements to Requirement R4 and PRC-0026-1 – Attachment B Criteria.
	Select all, or a sample, of the Element(s) identified pursuant to Requirements R1, R2, and R3, within the compliance monitoring period.
	For the selected Element(s), select all, or a sample, of the load-responsive protective relay(s).
	For the selected load-responsive protective relay(s), verify that the entity performed an evaluation based on the PRC-026-1 – Attachment B Criteria for each of the load-responsive protective relay(s).

Note to Auditor: Auditors may use their professional judgment in selecting load-responsive protective relays of an identified Element for audit testing. In cases where the application of a load-responsive protective relay may be typically applied on a selected Element, but not provided for evaluation, the auditor should question whether or not a load-responsive protective relay is applied on the selected Element.

The auditor should ensure that all load-responsive protective relays applied at the terminals of a selected Element have an evaluation based on PRC-026-1 – Attachment B Criteria. For example, if an entity owns load-responsive protective relays at both ends of a transmission line Element and only one end of the line tripped due to a power swing according to Requirement R2 or R3, the entity must evaluate all of the load-responsive protective relays for the identified Element (e.g., all terminals).

The auditor should consider cases where an Element was identified in the previous compliance monitoring period, but the evaluation of the load-responsive protective relay(s) occurred in the current compliance monitoring period.

Auditor Notes:

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R5 Supporting Evidence and Documentation

- R5.** Each Generator Owner and Transmission Owner shall, within 60 calendar days of an evaluation that identifies load-responsive protective relays that do not meet the PRC-026-1 – Attachment B Criteria pursuant to Requirement R4, develop a Corrective Action Plan (CAP) to modify the Protection System to meet the PRC-026-1 – Attachment B Criteria while maintaining dependable fault detection and dependable out-of-step tripping (if out-of-step tripping is applied at the terminal of the Element).
- M5.** The Generator Owner and Transmission Owner shall have dated evidence that demonstrates the development of a CAP in accordance with Requirement R5. Evidence may include, but is not limited to, the following documentation: corrective action plans, maintenance records, settings sheets, project or work management program records, or work orders.

Registered Entity Response (Required):

Question: Did the entity have any Protection Systems that required modification to meet PRC-026-1 – Attachment B Criteria?

- Yes
- No If no, then no further auditing of the Requirement may be necessary.

Note to Auditor:

[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 Requested¹:

Provide the following evidence, or other evidence to demonstrate compliance.

Dated documentation such as in Measure M5 (e.g., work management program records), within the compliance monitoring period, demonstrating the development of the CAPs, if any, for modifying the Protection System(s) pursuant to Requirement R4.

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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 PRC-026-1, R5

This section to be completed by the Compliance Enforcement Authority

	Interview an entity representative to understand the entity’s process for developing a CAP.
	Select all, or a sample of, CAP(s) for modifying the Protection System(s) within the compliance monitoring period.
	For the selected CAP(s), verify that each selected CAP documentation contains actions and a timetable for modifying the Protection System(s).
	For the selected CAP(s), verify that each selected CAP was developed within 60 calendar days of identifying a load-responsive protective relay that did not meet PRC-026-1 – Attachment B Criteria.
Note to Auditor: Auditors may use their professional judgment in selecting CAPs for audit testing. The auditor should consider whether or not Requirement R5 is applicable to the development of CAP(s) that started prior to the compliance monitoring period.	

Auditor Notes:

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R6 Supporting Evidence and Documentation

R6. Each Generator Owner and Transmission Owner shall implement each CAP developed pursuant to Requirement R5, and update each CAP if actions or timetables change until all actions are complete.

M6. The Generator Owner and Transmission Owner shall have dated evidence that demonstrates implementation of each CAP according to Requirement R6, including updates to actions or timetables. Evidence may include, but is not limited to, the following documentation: corrective action plans, maintenance records, settings sheets, project or work management program records, or work orders.

Registered Entity Response (Required):

Question: Did the entity develop any CAPs pursuant to Requirement R5?

Yes

No If no, then no further auditing of the Requirement may be necessary.

Note to Auditor:

[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:

Provide the following evidence, or other evidence to demonstrate compliance.
Dated documentation such as in Measure M6 (e.g., work management program records), within the compliance monitoring period, demonstrating the implementation of the CAP(s), if any, that were developed pursuant to Requirement R5.

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 PRC-026-1, R6

This section to be completed by the Compliance Enforcement Authority

	Interview an entity representative to understand the entity's process for implementing a CAP. For example, the updating of actions and timetables to demonstrate implementation.
	Select all, or a sample, of the CAP(s) within the compliance monitoring period.
	For each CAP selected, verify that actions and timetables were updated until all actions were complete.
Note to Auditor: Auditors may use their professional judgment in selecting the CAPs for audit testing. The auditor may consider verifying that actions or activities prescribed by the CAP were actually completed by the entity.	
The auditor should consider whether or not Requirement R6 is applicable to any CAP(s) prior to the compliance monitoring period.	

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

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

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Revision History for RSAW

Version	Date	Reviewers	Revision Description
1	05/23/2014	RSAW Task Force	New RSAW
2	9/8/2014	NERC Compliance, NERC Standards	Updated to reflect changes to Standard Requirements and Measures.

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.

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