

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

# PRC-010-2 - Undervoltage Load Shedding

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**

	ВА	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	RSG	то	ТОР	TP	TSP
R1							Χ							Χ	
R2		X3										<b>X</b> <sup>3</sup>			
R3							Χ							Χ	
R4							Χ							Χ	
R5							Χ							Χ	
R6							Χ								
R7		X3										<b>X</b> <sup>3</sup>			
R8							Χ								

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

<sup>&</sup>lt;sup>3</sup> Distribution Providers and Transmission Owners responsible for the ownership, operation, or control of undervoltage Load shedding (UVLS) equipment as required by the UVLS Program established by the Transmission Planner or Planning Coordinator.

# 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



# **Findings**

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

Req.	Finding	Summary and Documentation	<b>Functions Monitored</b>
R1			
R2			
R3			
R4			
R5			
R6			
<b>R7</b>			
R8			

Req.	Areas of Concern

Req.	Recommendations

Req.	Positive Observations

# **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)

## R1 Supporting Evidence and Documentation

- **R1.** Each Planning Coordinator or Transmission Planner that is developing a UVLS Program shall evaluate its effectiveness and subsequently provide the UVLS Program's specifications and implementation schedule to the UVLS entities responsible for implementing the UVLS Program. The evaluation shall include, but is not limited to, studies and analyses that show:
  - **1.1.** The implementation of the UVLS Program resolves the identified undervoltage issues that led to its development and design.
  - 1.2. The UVLS Program is integrated through coordination with generator voltage ride-through capabilities and other protection and control systems, including, but not limited to, transmission line protection, auto-reclosing, Remedial Action Schemes, and other undervoltage-based load shedding programs.
- M1. Acceptable evidence may include, but is not limited to, date-stamped studies and analyses, reports, or other documentation detailing the effectiveness of the UVLS Program, and date-stamped communications showing that the UVLS Program specifications and implementation schedule were provided to UVLS entities.

Registered Entity Response (Required):
Question:
Have you completed development of a UVLS Program during the audit period? $\Box$ Yes $\Box$ No
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.

- (R1) Provide date-stamped documentation showing that there was an evaluation of the UVLS Program's effectiveness per Parts 1.1 and 1.2 prior to providing the ULVS Program specifications and implementation schedule to UVLS entities.
- (R1) Provide date-stamped communications showing the UVLS Program specifications and implementation schedule were provided to UVLS entities.
- (Part 1.1) Provide date-stamped documentation that evaluates whether the implementation of the UVLS Program resolves the identified undervoltage issues that led to its development and design.
- (Part 1.2) Provide date-stamped documentation that evaluates whether the UVLS Program is integrated through coordination with generator voltage ride-through capabilities and other protection and control

systems, including, but not limited to, transmission line protection, auto-reclosing, Remedial Action Schemes, and other undervoltage-based load shedding programs.

Registered Entit	y Evidence	(Required	):
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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.

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

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

## Compliance Assessment Approach Specific to PRC-010-2, R1

This section to be completed by the Compliance Enforcement Authority

(R1) Review date-stamped documentation to validate that the Planning Coordinator or Transmission Planner that has developed a UVLS Program during the audit period has evaluated its effectiveness per Parts 1.1 and 1.2 prior to providing the ULVS Program specifications and implementation schedule to UVLS entities.

(R1) Review date-stamped communications to validate the UVLS Program specifications and implementation schedule were provided to UVLS entities. Specifications may include voltage set points, time delays, amount of load to be shed, the location at which load needs to be shed, etc.

(Part 1.1) Review date-stamped documentation to validate an evaluation was completed that shows the UVLS Program resolves the identified undervoltage issues that led to its development and design.

(Part 1.2) Review date-stamped documentation to validate an evaluation was completed that shows the UVLS Program is integrated through coordination with generator voltage ride-through capabilities and other protection and control systems, including, but not limited to, transmission line protection, autoreclosing, Remedial Action Schemes, and other undervoltage-based load shedding programs.

**Note to Auditor:** Requirement R1 is applicable only to Planning Coordinators or Transmission Planners that have completed development of a UVLS Program during the audit period; existing UVLS Programs (developed either prior to the audit period or prior to the effective date of PRC-010-2) are covered in Requirement R3.

A UVLS Program must mitigate risk of one more of the following: voltage instability, voltage collapse, or Cascading **impacting the BES**, and **not** undervoltage-based load shedding installed to mitigate damage to equipment or local loads that are directly affected by the low-voltage event. Centrally controlled undervoltage-based load shedding is also not considered a UVLS Program as it falls under the NERC Glossary definition of a Remedial Action Scheme.

## **R2 Supporting Evidence and Documentation**

- **R2.** Each UVLS entity shall adhere to the UVLS Program specifications and implementation schedule determined by its Planning Coordinator or Transmission Planner associated with UVLS Program development per Requirement R1 or with any Corrective Action Plans per Requirement R5.
- **M2.** Acceptable evidence must include date-stamped documentation on the completion of actions and may include, but is not limited to, identifying the equipment armed with UVLS relays, the UVLS relay settings, associated Load summaries, work management program records, work orders, and maintenance records.

## 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:i

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

- (R2) Provide the date-stamped implementation schedule for a UVLS Program provided by the Planning Coordinator or Transmission Planner.
- (R2) Provide date-stamped documentation demonstrating all necessary actions were completed to implement the UVLS Program.
- (R2) Provide a date-stamped list of all Corrective Action Plans (CAPs) provided by the Planning Coordinator or Transmission Planner.
- (R2) Provide date-stamped documentation demonstrating all necessary actions were completed to implement each CAP.

#### Registered Entity Evidence (Required):

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-010-2, R2
This section to be completed by the Compliance Enforcement Authority
(R2) Review date-stamped documentation to validate all necessary actions were completed by the UVLS
entity to implement a UVLS Program.
(R2) For each CAP listed, review date-stamped documentation to validate all necessary actions were
completed by the UVLS entity to implement the CAP.
Note to Auditor: Depending on the planning and documentation format used by the responsible entity,
evidence of a successful execution could consist of signed-off work orders, printouts from work
management systems, spreadsheets of planned versus completed work, timesheets, work inspection
reports, paid invoices, photographs, walk-through reports, or other evidence.
See the Guidelines and Technical Basis section of the standard, specifically the Guidelines for Requirement
R2, for documentation examples.
Auditor Notes:
Addition Notes.

## R3 Supporting Evidence and Documentation

- **R3.** Each Planning Coordinator or Transmission Planner shall perform a comprehensive assessment to evaluate the effectiveness of each of its UVLS Programs at least once every 60 calendar months. Each assessment shall include, but is not limited to, studies and analyses that evaluate whether:
  - **3.1.** The UVLS Program resolves the identified undervoltage issues for which the UVLS Program is designed.
  - **3.2.** The UVLS Program is integrated through coordination with generator voltage ride-through capabilities and other protection and control systems, including, but not limited to, transmission line protection, auto-reclosing, Remedial Action Schemes, and other undervoltage-based load shedding programs.
- M3. Acceptable evidence must include date-stamped documentation on the completion of actions and may include, but is not limited to, identifying the equipment armed with UVLS relays, the UVLS relay settings, associated Load summaries, work management program records, work orders, and maintenance records.

Registered Entity Response (Required):
Question:
Have you had a UVLS Program for more than 60 calendar months?   Yes   No
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.

(R3) Provide date-stamped documentation demonstrating performance of a comprehensive assessment to evaluate the UVLS Program's effectiveness per Parts 3.1 and 3.2 at least once every 60 calendar months.

(Part 3.1) Provide date-stamped documentation demonstrating each assessment included studies and analyses that evaluate whether the UVLS Program resolves the identified undervoltage issues for which the UVLS Program is designed.

(Part 3.2) Provide date-stamped documentation demonstrating each assessment included studies and analyses that evaluate whether the UVLS Program is integrated through coordination with generator voltage ride-through capabilities and other protection and control systems, including, but not limited to, transmission line protection, auto-reclosing, Remedial Action Schemes, and other undervoltage-based load shedding programs.

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.

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

Audit Team Evidence Reviewed (This sec	ction to be comp	leted by the Compliand	ce Enforcement Authority):

## Compliance Assessment Approach Specific to PRC-010-2, R3

This section to be completed by the Compliance Enforcement Authority

(R3) Review date-stamped documentation to validate a comprehensive assessment to evaluate the UVLS Program's effectiveness per Parts 3.1 and 3.2 was performed at least once every 60 calendar months.

(Part 3.1) Review date-stamped documentation to validate each assessment included studies and analyses that evaluate whether the UVLS Program resolves the identified undervoltage issues for which the UVLS Program is designed.

(Part 3.2) Review date-stamped documentation to validate if each assessment included studies and analyses that evaluate whether the UVLS Program is integrated through coordination with generator voltage ride-through capabilities and other protection and control systems, including, but not limited to, transmission line protection, auto-reclosing, Remedial Action Schemes, and other undervoltage-based load shedding programs.

**Note to Auditor:** The 60-calendar-month cycle is based on when a UVLS Program was established and not when PRC-010-2 became effective. If a comprehensive assessment is performed sooner than 60 calendar months due to material changes to system topology or operating conditions, the 60-calendar-month time period would restart upon completion of that assessment.

Auditor Notes:			

#### **R4 Supporting Evidence and Documentation**

- **R4.** Each Planning Coordinator or Transmission Planner shall, within 12 calendar months of an event that resulted in a voltage excursion for which its UVLS Program was designed to operate, perform an assessment to evaluate:
  - **4.1.** Whether its UVLS Program resolved the undervoltage issues associated with the event, and
  - **4.2.** The performance (i.e., operation and non-operation) of the UVLS Program equipment.
- **M4.** Acceptable evidence may include, but is not limited to, date-stamped event data, event analysis reports, or other documentation detailing the assessment of the UVLS Program and associated equipment.

## 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.

(R4) Provide a list of all events that resulted in a voltage excursion for which the UVLS Program was designed to operate.

(R4) Provide date-stamped documentation demonstrating an assessment was performed within 12 calendar months of each event that resulted in a voltage excursion for which the UVLS Program was designed to operate. Include a copy of the assessment used to evaluate whether the UVLS Program resolved the undervoltage issues and the performance of the UVLS Program equipment associated with the event.

(Part 4.1) Provide date-stamped documentation demonstrating an assessment evaluated whether the UVLS Program resolved the undervoltage issues associated with the event.

(Part 4.2) Provide date-stamped documentation demonstrating an assessment evaluated the performance of the UVLS Program equipment associated with the event.

## 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 I	e completed by	the Compliance	<b>Enforcement Authority):</b>

## Compliance Assessment Approach Specific to PRC-010-2, R4

This section to be completed by the Compliance Enforcement Authority

(R4) For each event listed, review the date-stamped documentation to validate an assessment was performed within 12 calendar months of the event.

(Part 4.1) For each event listed, review the date-stamped documentation to validate that the assessment evaluated whether the UVLS Program resolved the undervoltage issues associated with the event.

(Part 4.2) For each event listed, review the date-stamped documentation to validate that the assessment evaluated performance (i.e., operation and non-operation) of the UVLS Program equipment associated with the event.

**Note to Auditor:** It is expected that an assessment would include event data analysis, such as the relevant sequence of events leading to the undervoltage conditions (e.g., Contingencies, operation of protection systems, and Remedial Action Scheme) and field measurements useful to analyzing the behavior of the system.

A comprehensive description of the UVLS Program operation should be presented, including conditions of the trigger (e.g., voltage levels, time delays) and amount of load shed for each affected substation. Simulations of the event should have been performed to evaluate the level of performance of the UVLS Program for the event of interest and to identify deficiencies to be included in a Corrective Action Plan (CAP) per Requirement R5.

The studies and analyses showing the effectiveness of the UVLS Program can be similar to what is required in Requirements R1 and R3, but should include a clear link between the evaluation of effectiveness (in studies using simulations) and the analysis of the event (with measurements and event data) that actually occurred.

Auditor Notes:
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## **R5 Supporting Evidence and Documentation**

- **R5.** Each Planning Coordinator or Transmission Planner that identifies deficiencies during an assessment performed in either Requirement R3 or R4 shall develop a Corrective Action Plan to address the deficiencies and subsequently provide the Corrective Action Plan, including an implementation schedule, to UVLS entities within three calendar months of completing the assessment.
- **M5.** Acceptable evidence must include a date-stamped Corrective Action Plan that addresses identified deficiencies and may also include date-stamped reports or other documentation supporting the Corrective Action Plan. Evidence should also include date-stamped communications showing that the Corrective Action Plan and an associated implementation schedule were provided to UVLS entities.

## 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.

(R5) Provide a date-stamped list of all UVLS Program deficiencies identified during any assessments performed in either Requirement R3 or R4.

(R5) For each assessment that identified UVLS Program deficiencies, provide date-stamped documentation that demonstrates that a Corrective Action Plan (CAP), including an implementation schedule, was provided to UVLS entities within three calendar months of completing each assessment.

## Registered Entity Evidence (Required):

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):
Addit realli Evidence Reviewed (This Section to be completed by the Compliance Emorcement Additionty).
Compliance Assessment Approach Specific to PRC-010-2, R5
This section to be completed by the Compliance Enforcement Authority
(R5) Review the date-stamped documentation to validate UVLS Program deficiencies identified in any assessments performed in either Requirement R3 or R4 were addressed in a CAP.
(R5) Review the date-stamped documentation to validate that each CAP, including an implementation
schedule, was provided to UVLS entities within three calendar months of completing the assessment.
Note to Auditor: The "within three calendar months" time frame is solely to develop a CAP, including its
implementation schedule, and provide it to UVLS entities. It does not include the time needed for its
implementation by UVLS entities. This implementation time frame is dictated within the CAP's associated
timetable for implementation, and the execution of the CAP according to its schedule is required in
Requirement R2.
nequirement nz.
Auditor Notes:

## **R6 Supporting Evidence and Documentation**

- **R6.** Each Planning Coordinator that has a UVLS Program in its area shall update a database containing data necessary to model its UVLS Program for use in event analyses and assessments of the UVLS Program at least once each calendar year.
- **M6.** Acceptable evidence may include, but is not limited to, date-stamped spreadsheets, database reports, or other documentation demonstrating a UVLS Program database was updated.

# 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.

(R6) Provide date-stamped documentation that demonstrates a database containing data necessary to model an entity's UVLS Program for use in event analyses and assessments of the UVLS Program was updated at least once each calendar year.

(R6) Provide a date-stamped list of all data fields contained in the UVLS Program database.

#### Registered Entity Evidence (Required):

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-010-2, R6

This section to be completed by the Compliance Enforcement Authority

(R6) Review the date-stamped documentation to validate a database containing data necessary to model the UVLS Program for use in event analyses and assessments of the UVLS Program was updated at least once each calendar year.

(R6) Review the date-stamped documentation to validate the database includes the following items:

- Owner and operator of the UVLS Program
- Size and location of customer load, or percent of connected load, to be interrupted
- Corresponding voltage set points and clearing times
- Time delay from initiation to trip signal
- Breaker operating times
- Any other schemes that are part of or impact the UVLS Programs, such as related generation protection, islanding schemes, automatic load restoration schemes, UFLS, and RAS

**Note to Auditor:** See the Guidelines and Technical Basis section of the standard, specifically the guidelines for Requirement R6.

Auditor Notes:	

## **R7 Supporting Evidence and Documentation**

- **R7.** Each UVLS entity shall provide data to its Planning Coordinator according to the format and schedule specified by the Planning Coordinator to support maintenance of a UVLS Program database.
- **M7.** Acceptable evidence may include, but is not limited to, date-stamped emails, letters, or other documentation demonstrating data was provided to the Planning Coordinator as specified.

# 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:i

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

- (R7) Provide date-stamped documentation that demonstrates the format and schedule specified by the Planning Coordinator to support maintenance of a UVLS Program database.
- (R7) Provide date-stamped documentation that demonstrates data was provided to the Planning Coordinator according to the format and schedule specified by the Planning Coordinator to support maintenance of a UVLS Program database.

#### Registered Entity Evidence (Required):

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-010-2, R7

This section to be completed by the Compliance Enforcement Authority

(R7) Review the date-stamped documentation to validate the format and schedule specified by the Planning Coordinator to support maintenance of a UVLS Program database.

(R7) Review the date-stamped documentation to validate the UVLS entity provided data to the Planning Coordinator according to the format and schedule specified by the Planning Coordinator to support maintenance of a UVLS Program database.

**Note to Auditor:** The intent is for UVLS entities to review the data annually and provide changes to the Planning Coordinators so that Planning Coordinators can keep the databases current and accurate for performing event analysis and other assessments.

Auditor Notes:	

## **R8 Supporting Evidence and Documentation**

- **R8.** Each Planning Coordinator that has a UVLS Program in its area shall provide its UVLS Program database to other Planning Coordinators and Transmission Planners within its Interconnection, and other functional entities with a reliability need, within 30 calendar days of a written request.
- **M8.** Acceptable evidence may include, but is not limited to, date-stamped emails, letters, or other documentation demonstrating that the UVLS Program database was provided within 30 calendar days of receipt of a written request.

Registered Entity Response	(Required	<b>)</b> :
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## **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.

- (R8) Provide date-stamped documentation that demonstrates all written requests received.
- (R8) Provide date-stamped documentation that demonstrates you provided your UVLS Program database within 30 calendar days of all written requests.

#### Registered Entity Evidence (Required):

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

<b>Audit Team Evidence Reviews</b>	ed (This section to be comp	leted by the Compliance	Enforcement Authority):

## Compliance Assessment Approach Specific to PRC-010-2, R8

This section to be completed by the Compliance Enforcement Authority

(R8) Review the date-stamped documentation to validate written requests have been received.

(R8) Review the date-stamped documentation to validate the Planning Coordinator provided the UVLS Program database within 30 calendar days of written requests.

**Note to Auditor:** Requirement R8 only applies if a written request is received.

Auditor Notes:	

## Additional Information:

## **Reliability Standard**

The full text of PRC-010-2 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. See the *Selected Glossary Terms* section below for the approved definition of *Undervoltage Load Shedding Program*.

## Regulatory Language

[Placeholder for language from FERC Order approving PRC-010-2]

## **Selected Glossary Terms**

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

**Undervoltage Load Shedding Program (UVLS Program):** An automatic load shedding program consisting of distributed relays and controls used to mitigate undervoltage conditions leading to voltage instability, voltage collapse, or Cascading impacting the Bulk Electric System (BES). Centrally-controlled undervoltage-based load shedding is not included.

**Rationale for Definition:** As part of the development of PRC-010-2, the drafting team found it necessary to introduce the term Undervoltage Load Shedding Program (UVLS Program) to establish PRC-010-2's applicability. The following are critical defining elements of the proposed term:

- 1) The definition provides flexibility for the Planning Coordinator or Transmission Planner to determine if a UVLS system falls under the defined term with respect to the impact on the reliability of the BES. (See Guidelines and Technical Basis section for further discussion.)
- 2) Centrally-controlled undervoltage-based load shedding is excluded because its design and characteristics are commensurate with a Special Protection Systems (SPS) or Remedial Action Scheme (RAS) (wherein load shedding is the remedial action). As such, centrally-controlled undervoltage-based load shedding should be subject to SPS/RAS-related Reliability Standards. (See Guidelines and Technical Basis section for rationale.)

Consequently, the drafting team has recommended that Project 2010-05.2 – Special Protection Systems (Phase 2 of Protection Systems) include centrally-controlled undervoltage-based load shedding in the definition of a Special Protection System/Remedial Action Scheme.

3) The definition of UVLS Program is independent of whether the undervoltage load shedding relays are armed manually or automatically since the arming is done in anticipation of extreme conditions and not during the events when load shedding needs to occur.

Audit ID: Audit ID if available; or NCRnnnnn-YYYYMMDD

# **Revision History for RSAW**

Version	Date	Reviewers	Revision Description
1	2/19/2015	NERC Compliance,	New Document for PRC-010-2 based on RSAW
1	2/19/2015	Standards	version for PRC-010-1.

<sup>&</sup>lt;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.

Audit ID: Audit ID if available; or NCRnnnnn-YYYYMMDD