

**Reliability Standard Audit Worksheet[[1]](#footnote-2)**

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)[[2]](#footnote-3):** | Month DD, YYYY, to Month DD, YYYY |
| **Compliance Monitoring Method:** | [On-site Audit | Off-site Audit | Spot Check] |
| **Names of Auditors:**  | Supplied by CEA |

# **Applicability of Requirements**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **BA** | **DP** | **GO** | **GOP** | **PA/PC** | **RC** | **RP** | **RSG** | **TO** | **TOP** | **TP** | **TSP** |
| **R1** |  |  |  |  | X |  |  |  |  |  | X |  |
| **R2** |  | X[[3]](#footnote-4) |  |  |  |  |  |  | X3 |  |  |  |
| **R3** |  |  |  |  | X |  |  |  |  |  | X |  |
| **R4** |  |  |  |  | X |  |  |  |  |  | X |  |
| **R5** |  |  |  |  | X |  |  |  |  |  | X |  |
| **R6** |  |  |  |  | X |  |  |  |  |  |  |  |
| **R7** |  | X3 |  |  |  |  |  |  | X3 |  |  |  |
| **R8** |  |  |  |  | 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 |

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 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

1. 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. The implementation of the UVLS Program resolves the identified undervoltage issues that led to its development and design.
	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, autoreclosing, Remedial Action Schemes, and other undervoltage-based load shedding programs.
2. 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:** Has the entity developed a UVLS Program during the audit period?

 [ ]  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:[[4]](#endnote-2)

|  |
| --- |
| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Date-stamped documentation showing the entity developing a UVLS Program evaluated the UVLS Program’s effectiveness prior to providing the ULVS Program specifications and implementation schedule to UVLS entities. |
| Date-stamped communications showing the UVLS Program specifications and implementation schedule were provided to UVLS entities responsible for implementing the UVLS Program. |
| Evidence the entity’s evaluation includes studies and analysis that show the implementation of the UVLS Program resolves the identified undervoltage issues that led to its development and design. |
| Evidence the entity’s evaluation includes studies and analysis that show 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. |

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-010-2, R1

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

|  |  |
| --- | --- |
|  | (R1) Verify the Planning Coordinator or Transmission Planner that has developed a UVLS Program during the audit period has evaluated its effectiveness prior to providing the ULVS Program specifications and implementation schedule to UVLS entities. |
|  | (R1) Verify 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) Verify the entity’s evaluation includes studies and analysis that show the UVLS Program resolves the identified undervoltage issues that led to its development and design. |
|  | (Part 1.2) Verify the entity’s evaluation includes studies and analysis 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.Per the NERC Glossary of Terms, a UVLS Program is an automatic load shedding program, consisting of distributed relays and controls, used to mitigate undervoltage conditions impacting the Bulk Electric System (BES), leading to voltage instability, voltage collapse, or Cascading. Centrally controlled undervoltage-based load shedding is not included. |

Auditor Notes:

|  |
| --- |
|  |

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):**

**Question:** Was the entity subject to UVLS Program specifications or implementation schedules determined by its Transmission Planner or Planning Coordinator associated with UVLS Program development per Requirement R1 or with any Corrective Action Plans per Requirement R5?

 [ ]  Yes [ ]  No

If No, describe how this was determined in the narrative section below. If Yes, provide a list of UVLS Program specifications and implementation schedules.

[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:i

|  |
| --- |
| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| UVLS Program specifications and implementation schedules determined by the entity’s Planning Coordinator or Transmission Planner associated with UVLS Program development per Requirement R1 or with any Corrective Action Plans per Requirement R5. |
| Date-stamped documentation demonstrating the entity adhered to the UVLS Program specifications and implementation schedule by completion of specified actions within the specified timeframes. |

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-010-2, R2

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

|  |  |
| --- | --- |
|  | (R2) Verify the UVLS entity adhered 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. |
| **Note to Auditor:** See the Guidelines and Technical Basis section of the Standard, specifically the Guidelines for Requirement R2, for documentation examples. |

Auditor 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, autoreclosing, Remedial Action Schemes, and other undervoltage-based load shedding programs.

**M3.** Acceptable evidence may include, but is not limited to, date‐stamped reports or other documentation detailing the assessment of the UVLS Program.

**Registered Entity Response (Required):**

**Question:** Has the entity’s UVLS program existed 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:i

|  |
| --- |
| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| A dated list of previous assessments to evaluate the effectiveness of its UVLS Programs. |
| Date-stamped documentation demonstrating performance of a comprehensive assessment to evaluate the UVLS Program’s effectiveness at least once every 60 calendar months. |
| Evidence 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. |
| Evidence 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, autoreclosing, 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.** |
| **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, R3

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

|  |  |
| --- | --- |
|  | (R3) Verify a comprehensive assessment to evaluate the UVLS Program’s effectiveness was performed at least once every 60 calendar months. |
|  | (Part 3.1) Verify 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) Verify 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 time period is based upon completion of the entity’s previous UVLS 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):**

**Question:** Has theentity experienced an event that resulted in a voltage excursion for which its UVLS Program was designed to operate?

 [ ]  Yes [ ]  No

If No, describe how this was determined in the narrative section below. If Yes, provide a list of events that resulted in a voltage excursion for which the entity’s UVLS Program was designed to operate.

[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:i

|  |
| --- |
| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| 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.  |
| Evidence demonstrating the assessment(s) evaluated whether the UVLS Program resolved the undervoltage issues associated with the event. |
| Evidence demonstrating the assessment(s) 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 be completed by the Compliance Enforcement Authority):

|  |
| --- |
|  |
|  |
|  |

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

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

|  |  |
| --- | --- |
|  | (R4) Verify the entity performed an assessment within 12 calendar months of an event that resulted in a voltage excursion for which the entity’s UVLS Program was designed to operate |
|  | (Part 4.1) Verify the assessment(s) evaluated whether the UVLS Program resolved the undervoltage issues associated with the event. |
|  | (Part 4.2) Verify the assessment(s) evaluated performance (i.e., operation and non-operation) of the UVLS Program equipment associated with the event. |
| **Note to Auditor:** See the Guidelines and Technical Basis section of the Standard, specifically the Guidelines for Requirement R4, for documentation examples. |

**Auditor Notes:**

|  |
| --- |
|  |

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):**

**Question:** Has the entity identified deficiencies during an assessment performed in either Requirement R3 or R4?

 [ ]  Yes [ ]  No

If No, describe how this was determined in the narrative section below. If Yes, provide the date of the assessment and a list of deficiencies identified.

[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:i

|  |
| --- |
| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Results for assessments performed in Requirement R3 and R4. |
| Evidence the entity developed a Corrective Action Plan to address deficiencies identified during an assessment performed in either Requirement R3 or R4. |
| Date-stamped documentation demonstrating 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):

|  |
| --- |
| **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-010-2, R5

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

|  |  |
| --- | --- |
|  | (R5) Verify the entity developed a Corrective Action Plan to address any deficiencies identified during an assessment performed in either Requirement R3 or R4. |
|  | (R5) Verify each Corrective Action Plan, including an implementation schedule, was provided to UVLS entities within three calendar months of completing the assessment. |
| **Note to Auditor:**  |

**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:i

|  |
| --- |
| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| List of data necessary to model the entity’s UVLS Program for use in event analyses and assessments of the UVLS Program. |
| Date-stamped documentation demonstrating 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. |

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-010-2, R6

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

|  |  |
| --- | --- |
|  | (R6) Verify 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. |
| **Note to Auditor:** The UVLS Program database may include, but is not limited to the following:* 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, underfrequency load shedding (UFLS), and RAS
 |

**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.** |
| Date-stamped documentation demonstrating the format and schedule specified by the Planning Coordinator to support maintenance of a UVLS Program database. |
| Date-stamped documentation demonstrating 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):

|  |
| --- |
| **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-010-2, R7

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

|  |  |
| --- | --- |
|  | (R7) Verify 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):**

**Question:** Has the entity received a written request from other Planning Coordinators and Transmission Planners within its Interconnection, and other functional entities with a reliability need, to provide its UVLS Program database?

 [ ]  Yes [ ]  No

If No, describe how this was determined in the narrative section below. If Yes, provide a dated list of written requests received.

[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:i

|  |
| --- |
| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Date-stamped documentation demonstrating the entity provided its UVLS Program database to requesting entities within 30 calendar days of all written requests. |

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-010-2, R8

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

|  |  |
| --- | --- |
|  | (R8) Verify the entity provided its UVLS Program database to requesting entities 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

*Federal Energy Regulatory Commission*, Letter Order Approving Proposed Reliability Standards PRC-004-5 and PRC-010-2, Docket No. RD15-5-000 (FERC Nov. 19, 2015).

NERC states that Reliability Standard PRC-004-5 is revised to apply to UVLS protection systems that are intended to trip one or more bulk electric system elements. According to NERC, Reliability Standard PRC-010-2 includes revisions to Requirement R4 to expressly require the evaluation of UVLS program equipment performance, with a conforming change to Requirement R5. NERC explains that Reliability Standard PRC-010-2 updates PRC-010-1 “by explicitly addressing the operations/nonoperation (i.e., Misoperation) of UVLS Equipment to avoid a gap in coverage due to the retirement of Reliability Standard PRC-022-1.”**3** Further, NERC states that PRC-010-2 “achieves this by expressly referencing performance (i.e., operation/non-operation) of the UVLS Program equipment at Requirement R4 with a conforming update to Requirement R5 to specifically reference the assessment performed in Requirement R4.

NERC’s uncontested filing is hereby approved pursuant to the relevant authority delegated to the Director, Office of Electric Reliability under 18 C.F.R. § 375.303, effective as of the date of this order.

Revisions to Emergency Operations Reliability Standards; Revisions to Undervoltage Load Shedding Reliability Standards; Revisions to the Definition of “Remedial Action Scheme” and Related Reliability Standards, Final Rule, Order No. 818, 153 FERC ¶ 61,228 (2015).

1. Pursuant to section 215 of the Federal Power Act (FPA), the Commission approves Reliability Standards and definitions of terms submitted in three related petitions by the North American Electric Reliability Corporation (NERC), the Commission-approved Electric Reliability Organization (ERO). In particular, the Commission approves Reliability Standards EOP-011-1 (Emergency Operations) and PRC-010-1 (Undervoltage Load Shedding). The Commission finds that the Reliability Standards consolidate, streamline, and clarify the existing requirements of several currently-effective Emergency Preparedness and Operations (EOP) and Protection and Control (PRC) standards, and address certain Commission directives set forth in Order No. 693.

2. Further, the Commission approves NERC’s revised definition of the term Remedial Action Scheme as set forth in the NERC Glossary of Terms Used in Reliability Standards (NERC Glossary), and modifications of specified Reliability Standards to incorporate the revised definition. Also, the Commission approves the associated implementation plans and assigned violation risk factors and violation severity levels for Reliability Standard EOP-011-1 and Reliability Standard PRC-010-1, as well as the retirement of certain currently-effective Reliability Standards.

4. In Order No. 693, the Commission also approved several Undervoltage Load Shedding (UVLS)-related Reliability Standards, including PRC-010-0, PRC-021-1 and PRC-022-1.Further, the Commission directed NERC to modify Reliability Standard PRC-010-0 to develop an “integrated and coordinated” approach to all protection systems. In Order No. 693, the Commission approved the NERC Glossary, including NERC’s currently-effective Special Protection System and Remedial Action Scheme definitions.

27. The Commission proposed to approve the retirement of Reliability Standards EOP-001-2.1b, EOP-002-3.1, EOP-003-2, PRC-010-0, PRC-020-1 and PRC-021-1. However, the Commission expressed concerns about whether it was appropriate to retire PRC-022-1 before a replacement Reliability Standard is approved and implemented to address the potential misoperation of UVLS equipment. Accordingly, the Commission proposed to deny NERC’s request to retire Reliability Standard PRC-022-1 concurrent with the effective date of PRC-010-1.

45. In the NOPR, while proposing to approve Reliability Standard PRC-010-1 and the retirement of PRC-010-0, PRC-020-1 and PRC-021-1, the Commission was not persuaded that Reliability Standard PRC-010-1, Requirement R4 is an adequate replacement for currently-effective PRC-022-1, which contains requirements specifically addressing misoperations. Rather, the Commission proposed that Reliability Standard PRC-022-1 would remain in effect until an acceptable replacement Reliability Standard is in place to address the potential misoperation of UVLS equipment.

47. We agree with NERC and EEI that the Delegated Letter Order approval of Reliability Standards PRC-004-5 and PRC-010-2 in Docket No. RD15-5-000 concurrent with this Final Rule precludes the need to retain currently-effective Reliability Standard PRC-022-1.Accordingly, we find that Reliability Standard PRC-022-1 can be retired without creating a gap in coverage with regard to UVLS protective relay misoperations and equipment performance evaluations.

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.

Revision History for RSAW

| **Version** | **Date** | **Reviewers** | **Revision Description** |
| --- | --- | --- | --- |
| 1 | 2/19/2015 | NERC Compliance, Standards | New Document for PRC-010-2 based on RSAW version for PRC-010-1. |
| 2 | 3/9/2017 | NERC Compliance Assurance, RSAW Task Force | Revised for consistency with the final approved Standard. |

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. [↑](#footnote-ref-2)
2. Compliance Assessment Date(s): The date(s) the actual compliance assessment (on-site audit, off-site spot check, etc.) occurs. [↑](#footnote-ref-3)
3. 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. [↑](#footnote-ref-4)
4. 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. [↑](#endnote-ref-2)