

# Standard PRC-022-1 — Under-Voltage Load Shedding Program Performance

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## A. Introduction

1. **Title:** Under-Voltage Load Shedding Program Performance
2. **Number:** PRC-022-1
3. **Purpose:** Ensure that Under Voltage Load Shedding (UVLS) programs perform as intended to mitigate the risk of voltage collapse or voltage instability in the Bulk Electric System (BES).
4. **Applicability**
  - 4.1. Transmission Operator that operates a UVLS program.
  - 4.2. Distribution Provider that operates a UVLS program.
  - 4.3. Load-Serving Entity that operates a UVLS program.
5. **Effective Date:** May 1, 2006

## B. Requirements

- R1. Each Transmission Operator, Load-Serving Entity, and Distribution Provider that operates a UVLS program to mitigate the risk of voltage collapse or voltage instability in the BES shall analyze and document all UVLS operations and Misoperations. The analysis shall include:
  - R1.1. A description of the event including initiating conditions.
  - R1.2. A review of the UVLS set points and tripping times.
  - R1.3. A simulation of the event, if deemed appropriate by the Regional Reliability Organization. For most events, analysis of sequence of events may be sufficient and dynamic simulations may not be needed.
  - R1.4. A summary of the findings.
  - R1.5. For any Misoperation, a Corrective Action Plan to avoid future Misoperations of a similar nature.
- R2. Each Transmission Operator, Load-Serving Entity, and Distribution Provider that operates a UVLS program shall provide documentation of its analysis of UVLS program performance to its Regional Reliability Organization within 90 calendar days of a request. (Retirement approved by FERC effective January 21, 2014.)

## C. Measures

- M1. Each Transmission Operator, Load-Serving Entity, and Distribution Provider that operates a UVLS program shall have documentation of its analysis of UVLS operations and Misoperations in accordance with Requirement 1.1 through 1.5.
- M2. Each Transmission Operator, Load-Serving Entity, and Distribution Provider that operates a UVLS program shall have evidence that it provided documentation of its analysis of UVLS program performance within 90 calendar days of a request by the Regional Reliability Organization. (Retirement approved by FERC effective January 21, 2014.)

## D. Compliance

1. Compliance Monitoring Process
  - 1.1. **Compliance Monitoring Responsibility**

Regional Reliability Organization.

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### 1.2. Compliance Monitoring Period and Reset Time Frame

One calendar year.

### 1.3. Data Retention

Each Transmission Operator, Load-Serving Entity, and Distribution Provider that operates a UVLS program shall retain documentation of its analyses of UVLS operations and Misoperations for two years. The Compliance Monitor shall retain any audit data for three years.

### 1.4. Additional Compliance Information

Transmission Operator, Load-Serving Entity, and Distribution Provider shall demonstrate compliance through self-certification or audit (periodic, as part of targeted monitoring or initiated by complaint or event), as determined by the Compliance Monitor.

## 2. Levels of Non-Compliance

**2.1. Level 1:** Not applicable.

**2.2. Level 2:** Documentation of the analysis of UVLS performance was provided but did not include one of the five requirements in R1.

**2.3. Level 3:** Documentation of the analysis of UVLS performance was provided but did not include two or more of the five requirements in R1.

**2.4. Level 4:** Documentation of the analysis of UVLS performance was not provided.

## E. Regional Differences

None identified.

### Version History

Version	Date	Action	Change Tracking
1	December 1, 2005	<ol style="list-style-type: none"> <li>1. Removed comma after 2004 in “Development Steps Completed,” #1.</li> <li>2. Changed incorrect use of certain hyphens (-) to “en dash” (–) and “em dash (—).”</li> <li>3. Lower cased the word “region,” “board,” and “regional” throughout document where appropriate.</li> <li>4. Added or removed “periods” where appropriate.</li> <li>5. Changed “Timeframe” to “Time Frame” in item D, 1.2.</li> </ol>	January 20, 2006
1	February 7, 2006	Adopted by the NERC Board of Trustees	
1	March 16, 2007	Approved by FERC	
1	February 7, 2013	R2 and associated elements approved by NERC Board of Trustees for retirement as part of the Paragraph 81 project (Project 2013-02) pending	

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		applicable regulatory approval.	
1	November 21, 2013	R2 and associated elements approved by FERC for retirement as part of the Paragraph 81 project (Project 2013-02)	