

## **A. Introduction**

- 1. Title:** Analysis and Mitigation of Transmission and Generation Protection System Misoperations
- 2. Number:** PRC-004-1
- 3. Purpose:** Ensure all transmission and generation Protection System Misoperations affecting the reliability of the Bulk Electric System (BES) are analyzed and mitigated.
- 4. Applicability**
  - 4.1.** Transmission Owner.
  - 4.2.** Distribution Provider that owns a transmission Protection System.
  - 4.3.** Generator Owner.
- 5. Effective Date:** August 1, 2006

## **B. Requirements**

- R1.** The Transmission Owner and any Distribution Provider that owns a transmission Protection System shall each analyze its transmission Protection System Misoperations and shall develop and implement a Corrective Action Plan to avoid future Misoperations of a similar nature according to the Regional Reliability Organization's procedures developed for Reliability Standard PRC-003 Requirement 1.
- R2.** The Generator Owner shall analyze its generator Protection System Misoperations, and shall develop and implement a Corrective Action Plan to avoid future Misoperations of a similar nature according to the Regional Reliability Organization's procedures developed for PRC-003 R1.
- R3.** The Transmission Owner, any Distribution Provider that owns a transmission Protection System, and the Generator Owner shall each provide to its Regional Reliability Organization, documentation of its Misoperations analyses and Corrective Action Plans according to the Regional Reliability Organization's procedures developed for PRC-003 R1.

## **C. Measures**

- M1.** The Transmission Owner, and any Distribution Provider that owns a transmission Protection System shall each have evidence it analyzed its Protection System Misoperations and developed and implemented Corrective Action Plans to avoid future Misoperations of a similar nature according to the Regional Reliability Organization procedures developed for PRC-003 R1.
- M2.** The Generator Owner shall have evidence it analyzed its Protection System Misoperations and developed and implemented Corrective Action Plans to avoid future Misoperations of a similar nature according to the Regional Reliability Organization's procedures developed for PRC-003 R1.
- M3.** Each Transmission Owner, and any Distribution Provider that owns a transmission Protection System, and each Generator Owner shall have evidence it provided documentation of its Protection System Misoperations, analyses and Corrective Action Plans according to the Regional Reliability Organization procedures developed for PRC-003 R1.

## **D. Compliance**

- 1. Compliance Monitoring Process**

**1.1. Compliance Monitoring Responsibility**

Regional Reliability Organization.

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

One calendar year.

**1.3. Data Retention**

The Transmission Owner, and Distribution Provider that own a transmission Protection System and the Generator Owner that owns a generation Protection System shall each retain data on its Protection System Misoperations and each accompanying Corrective Action Plan until the Corrective Action Plan has been executed or for 12 months, whichever is later.

The Compliance Monitor shall retain any audit data for three years.

**1.4. Additional Compliance Information**

The Transmission Owner, and any Distribution Provider that owns a transmission Protection System and the Generator Owner 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 for Transmission Owners and Distribution Providers that own a Transmission Protection System:**

- 2.1. Level 1:** Documentation of Misoperations is complete according to PRC-004 R1, but documentation of Corrective Action Plans is incomplete.
- 2.2. Level 2:** Documentation of Misoperations is incomplete according to PRC-004 R1 and documentation of Corrective Action Plans is incomplete.
- 2.3. Level 3:** Documentation of Misoperations is incomplete according to PRC-004 R1 and there are no associated Corrective Action Plans.
- 2.4. Level 4:** Misoperations have not been analyzed and documentation has not been provided to the Regional Reliability Organization according to Requirement 3.

**3. Levels of Non-Compliance for Generator Owners**

- 3.1. Level 1:** Documentation of Misoperations is complete according to PRC-004 R2, but documentation of Corrective Action Plans is incomplete.
- 3.2. Level 2:** Documentation of Misoperations is incomplete according to PRC-004 R2 and documentation of Corrective Action Plans is incomplete.
- 3.3. Level 3:** Documentation of Misoperations is incomplete according to PRC-004 R2 and there are no associated Corrective Action Plans.
- 3.4. Level 4:** Misoperations have not been analyzed and documentation has not been provided to the Regional Reliability Organization according to R3.

**E. Regional Differences**

None identified.

**Version History**

| <b>Version</b> | <b>Date</b>      | <b>Action</b>  | <b>Change Tracking</b> |
|----------------|------------------|--|------------------------|
| 0              | April 1, 2005    | Effective Date   | New                    |
| 1              | December 1, 2005 | <ol style="list-style-type: none"><li>1. Changed incorrect use of certain hyphens (-) to “en dash” (–) and “em dash (—).”</li><li>2. Added “periods” to items where appropriate.</li></ol> Changed “Timeframe” to “Time Frame” in item D, 1.2. | 01/20/06               |