

# Implementation Plan

## Project 2007-11 Disturbance Monitoring

### Requested Approvals

- PRC-002-2 Disturbance Monitoring and Reporting Requirements

### Requested Retirements

- PRC-002-1 Define Regional Disturbance Monitoring and Reporting Requirements
- PRC-018-1 Disturbance Monitoring Equipment Installation and Data Reporting

### Prerequisite Approvals

- None

### Applicable Entities

- Planning Coordinator
- Reliability Coordinator
- Transmission Owner
- Generator Owner

### Revisions to Defined Terms in the NERC Glossary

- None

### Background

The Implementation Plan reflects consideration of the following:

1. This standard reflects the need for data, rather than equipment, with the understanding that the data is collected from Disturbance Monitoring Equipment distributed across the BES.
2. A significant amount of sequence of events recording (SER), fault recording (FR), and dynamic Disturbance recording (DDR) capability already exists on the BES. The monitoring requirements in this standard align with industry practices. Therefore, many existing recordings can satisfy the Requirements and Implementation Plan put forth.
3. Fault MVA data is readily available or calculable by the Transmission Owners for the BES buses they own. Therefore, six (6) months is adequate time for generating the list of BES buses following the methodology described in Attachment 1 (for Requirement R1).

4. Responsible entities have the relevant data and information pertaining to the BES Elements requiring DDR and six (6) months is adequate time for working with any affected entities and generating the list of BES Elements.
5. The nine (9) month time period for R12 includes the six (6) month implementation for R1 and R5, and a three (3) month additional time period to make notifications. The nine (9) months for R12 implementation is reasonable for the contents of that requirement.
6. A total percentage of BES buses and BES Elements established in Requirements R1 and R5 respectively are used in the Implementation Plan since these lists are explicitly created and readily available. It is expected that many monitoring requirements will become compliant without significant changes to recording capability.
7. A graduated approach to implementation recognizes that progress will be made while attempting to minimize any potential significant impact to the entities.
8. Implementation of Disturbance monitoring recording following changes to the system are addressed by following re-evaluation of the lists as per Requirement R1 and Requirement R5.
9. Implementing SER, FR, and DDR capability may require scheduled outages for both Transmission Owners and Generator Owners. Generator Owners may have outage cycles of 24 months or more depending on the type and characteristics of the generating units or plant. Meanwhile, Transmission Owners probably will have more BES Elements requiring SER, FR, and DDR and may have to schedule outages across the system. The Implementation Plan takes scheduling outages into account.
10. An entity owning only one (1) identified BES bus, BES Element, or generating unit is allowed six (6) years for implementation to accommodate normal outage schedules.
11. The Implementation Plan accounts for any increase in requests to vendors for this technology or capability that could impact implementation timelines for the respective entities.

### **General Considerations**

Each Transmission Owner and Generator Owner subject to PRC-018-1 shall maintain the ability to provide Disturbance monitoring data using current methods required by PRC-018-1 until the entity meets the requirements of PRC-002-2 in accordance with this Implementation Plan. As required in PRC-018-1 Disturbance Monitoring Equipment Installation and Data Reporting, Requirement R1, Parts 1.1 and 1.2, it is expected that the Transmission Owner and Generator Owner will have those functionalities with regard to their current Disturbance data.

## Effective Date

The standard shall become effective on the first day of the first calendar quarter six (6) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter six (6) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

## Standard(s) for Retirement

PRC-002-1     Midnight of the day immediately prior to the effective date of PRC-002-2 in the particular jurisdiction in which the new standard is becoming effective.

Each Transmission Owner, and Generator Owner shall maintain documentation to demonstrate compliance with PRC-018-1 until that entity meets the requirements of PRC-002-2 in accordance with this Implementation Plan. Standard PRC-018-1 shall remain effective throughout the phased implementation period of PRC-002-2 and shall be applicable to an entity's Disturbance monitoring and reporting activities not yet transitioned to PRC-002-2. PRC-018-1 will be retired following full implementation of PRC-002-2 as noted below.

PRC-018-1     Midnight of the day immediately prior to six (6) years after the effective date of PRC-002-2 in the particular jurisdiction in which the new standard is becoming effective.

## Implementation Plan for PRC-002-2 Requirements R1 and R5:

Entities shall be 100 percent compliant on the first day of the first calendar quarter six (6) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is six (6) months after the date the standard is adopted by the NERC Board of Trustees, or as otherwise provided for in that jurisdiction.

## Implementation Plan for PRC-002-2 Requirement R12:

Entities shall be 100 percent compliant on the first day of the first calendar quarter nine (9) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is nine (9) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

**Implementation Plan for PRC-002-2 Requirements R2, R3, R4, R6, R7, R8, R9, R10, R11:**

Entities shall be at least 50 percent compliant within four (4) years of the effective date of PRC-002-2 and fully compliant within six (6) years of the effective date.

Entities that own only one (1) identified BES bus, BES Element, or generating unit shall be fully compliant within six (6) years of the effective date.

Entities shall be 100 percent compliant with a re-evaluated list from Requirement R1 or R5 within three (3) years following the notification by the TO or the Responsible Entity that re-evaluated the list.

**Conforming Changes to Other Standards**

Where conflicts between the continent-wide standard PRC-002-2 and a regional standard exist, entities should comply with PRC-002-2. Conflicts will be addressed in the appropriate regional standards development process.

- PRC-002-2 Requirement R3 stipulates data must be captured by FR to determine electrical quantities. PRC-002-NPCC-01 Requirement R3 stipulates the recording of those quantities.
- PRC-002-2 Requirement R5 stipulates the capture of DDR data for HVDC. PRC-002-NPCC-01 does not specify HVDC for DDR.
- PRC-002-2 Requirement R8 recognizes DDR that is not continuous, and includes triggering data for DDR that is not continuous. PRC-002-NPCC-01 stipulates that dynamic Disturbance recorders installed after that standard was approved have to be continuous, but does not address legacy devices.