

# Implementation Plan

## Project 2018-04 Modifications to PRC-024-2 Reliability Standard PRC-024-3

### Applicable Standard

- Reliability Standard PRC-024-3 – ~~Generator~~ Frequency and Voltage Protection Settings for Generating Resources

### Requested Retirement

- Reliability Standard PRC-024-2 – Generator Frequency and Voltage Protective Relay Settings

### Prerequisite Standard(s)

- None

### Applicable Entities

- Generator Owners that apply protection listed in Section 4.2.1.
- Transmission Owners (in the Quebec Interconnection only) that own a BES generator step-up (GSU) transformer or main power transformer (MPT) and apply protection listed in Section 4.2.1.
- Planning Coordinators (in the Quebec Interconnection only).
- ~~Generator Owners that apply protection listed in Section 4.2.1.~~
- ~~Transmission Owners that own a BES generator step-up transformer or collector transformer and apply protection listed in Section 4.2.1.~~

### Background

Reliability Standard PRC-024-3 contains a series of revisions and clarifications intended to help ensure that inverter-based resources respond to grid disturbances in a manner that contributes to the reliable operation of the Bulk-Power System.

The standard was revised to address recommendations of the NERC Inverter-Based Resource Performance Task Force. These recommendations were developed in response to the findings and recommendations of the NERC and WECC analysis of the Blue Cut Fire and Canyon 2 Fire disturbances in southern California.

In addition, the standard includes a Regional Variance for the Quebec Interconnection and related revisions to clarify the applicability of the standard in that Interconnection.

### Address issues related to IBRs dropping offline

On November 27, 2018, the NERC Operating Committee (OC) and Planning Committee (PC) submitted a Standard Authorization Request (SAR) prepared by the Inverter-Based Resource Performance Task Force (IRPTF), which reports to the OC and PC. Project 2018-04 addresses this SAR.

In 2017, the OC and PC convened the IRPTF shortly after it became clear that inverter-based generation was dropping off line during normally cleared Bulk Power System (BPS) line faults. The NERC IRPTF supported NERC and WECC staff in the analysis of the Blue Cut Fire and Canyon 2 Fire disturbances in southern California. From the key findings and recommendations in the reports on the analysis, the IRPTF (as a stakeholder group of industry experts) developed recommended performance characteristics from inverter-based resources connected to the BPS.

Based off the disturbance analyses and development of the PRC-024-2 Gaps Whitepaper, the IRPTF identified potential modifications to PRC-024-2 to help ensure that inverter-based generator owners, operators, developers, and equipment manufacturers understand the intent of the standard in order for their plants respond to grid disturbances in a manner that contributes to the reliable operation of the BPS.

### Supplemental SAR

## General Considerations

This Implementation Plan is intended to provide applicable entities with sufficient time to evaluate settings, make changes for applicable equipment, and purchase necessary equipment, if necessary. Setting changes and equipment installations are typically completed during generating Facility outages, which may be scheduled in up to twenty-four (24) month intervals. includes an effective date as well as phased-in compliance dates. As detailed below, there are two compliance dates: one for Generator Owners, and one for Transmission Owners.

## Effective Date

### Reliability Standard PRC-024-3

Where approval by an applicable governmental authority is required, the standard shall become effective on the first day of the first calendar quarter that is twenty-four (24) eighteen (18) months after the effective date of the applicable governmental authority's order approving the standard, or as otherwise provided for by the applicable governmental authority.

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 twenty-four (24) eighteen (18) months after the date the standard is adopted by the NERC Board of Trustees, or as otherwise provided for in that jurisdiction.

### Compliance Date for Applicable Generator Owners

~~Applicable Generator Owners shall comply with all Requirements upon the effective date of Reliability Standard PRC-024-3.~~

### **Retirement Date**

#### **Reliability Standard PRC-024-2**

Reliability Standard PRC-024-2 shall be retired immediately prior to the effective date of Reliability Standard PRC-024-3 in the particular jurisdiction in which the revised standard is becoming effective.