

# NERC PRC-005 Compliance Solutions

## Overview

### Are You Compliant with PRC-005?

The PRC-005 Protection System Maintenance standard documents and implements programs for the maintenance of all protection systems affecting the reliability of the Bulk Electric System (BES), so the protection systems are kept in working order.

Vertiv's Electrical Reliability Services (ERS) experts in NERC compliance are ready to help you ensure your system is NERC compliant with the latest PRC-005 requirements.

### Protection Systems Subject to PRC-005 Requirements:

- Generator Protection
- Main Transformer Protection
- Station Service Transformer, Unit Auxiliary Transformer, and Excitation Transformer Protection
- Transmission Lines and Substation Buses Protection
- Undervoltage or Underfrequency Load-Shedding Protection
- Sudden Pressure Relaying
- Automatic Reclosing

### Equipment Subject to PRC-005 Requirements:

- Protective Relays
- Reclosing and Supervisory Relays
- Sudden Pressure Relays
- Voltage and Current Sensing Devices (CT/PT)
- Station DC Supply
- Communication Systems
- Control Circuitry Associated with Protective Functions
- Control Circuitry Associated with Reclosing and Supervisory Relays
- Alarming Paths and Monitoring



## Ensure compliance with NERC PRC-005 regulatory requirements

Understanding and complying with reliability standard PRC-005 requires considerable knowledge of the technical aspects and methodology used to successfully implement the requirements. Compliance with this standard includes three main actions:

- Identification of relevant system components and development of a Protection System Maintenance Plan (PSMP)
- Maintenance of applicable components within the required time frame
- Creation of clear and concise maintenance documentation for NERC compliance audit purposes

PRC-005 has ongoing deadlines, based on device type and the date when the owner/operator registered for compliance.

ERS offers comprehensive coverage of NERC PRC-005 requirements, including the following services:

- Development of a PSMP and Method of Procedure (MOP) for Applicable Components
- Baseline PSMP Audit and Compliance Status

- Protective Relay Maintenance Testing
- Sudden Pressure and Automatic Reclosers Maintenance Testing
- CT/PT Testing and Signal Verification
- Station DC Battery & Battery Charger Maintenance and Load Testing
- Protection System Control Circuit Verifications
- Functional Verifications of the Communication Systems and Alarm Paths
- Ongoing Maintenance Tracking and Outage Scope Development
- Preparation of Maintenance Records and Compliance Documents
- Engineering Services to Update Process Documents, Drawings, or Relay Settings and Programming to Reflect As-Found Conditions
- Turn-Key Services to Mitigate Unresolved Maintenance Issues, Such as Equipment or Systems Modification, Replacement or Upgrade.
- Post-Maintenance Report Audit and PSMP Updates



## Summary

The experts at Electrical Reliability Services are ready to help you through each step of the compliance process. You will be able to effectively develop and execute a plan to achieve compliance with PRC-005 by relying on our expertise.

## Ordering Information

To learn more about this service or other NERC compliance solutions, please contact your local ERS office at 1-877-468-6384 or visit [ERS.Vertiv.com](http://ERS.Vertiv.com).

### Protection System, Automatic Reclosing and Sudden Pressure Relaying for BES Elements Maintenance Requirements (PRC-005-6)

Components	Maximum Maintenance Interval	Maintenance Activities
Unmonitored Protective or Reclosing Relays	6 Years	Relay Calibration & Functional Test
Monitored Microprocessor Protective or Reclosing Relays	12 Years	Relay Calibration & Functional Test
Unmonitored Communications System	4 Months	Functional Test
	6 Years	Operational & Performance Test
Monitored Communications System	12 Years	Operational & Performance Test
Unmonitored Voltage and Current Sensors or V/I Sensors for UFLS/UVLS/Automatic Reclose Systems	12 Years	Verification of Signal Values
	4-6 Months	Electrical Measurement & Inspection
	18 Months	Battery and Battery Charger Test
Protection System DC Supply for Non-BES Devices with Unmonitored VLA, VRLA or NiCD Batteries, or Non-Battery Based Energy Storage	3-6 Years	Battery Bank/Energy Storage Capacity Test
	6 Years	Verification of Electrical Operation
Breaker Trip Coils and Lockout Devices	6 Years	Verification of Electrical Operation
Unmonitored Control Circuitry and Alarms for Protection, Automatic Reclosing & Sudden Pressure Relaying	12 Years	Verification of Electrical Operation
V/I Sensors, DC Supply, Lockout, and Control Circuitry for UFLS or UVLS Systems	12 Years	Electrical Measurement Verification of Electrical Operation
Close Coils for Automatic Reclosing of Remedial Action Scheme	6 Years	Verification of Electrical Operation
Fault/Sudden Pressure Relays	6 Years	Functional Test

**To Learn More Call 1-877-468-6384 or Visit Us at [ERS.Vertiv.com](http://ERS.Vertiv.com)**

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