

Mapping Document Showing Translation of PRC-005-1 – Transmission and Generation Protection System Maintenance and Testing, PRC-008-0- Implementation and Documentation of Underfrequency Load Shedding Equipment Maintenance Program, PRC-011-0 - Undervoltage Load Shedding System Maintenance and Testing, and PRC-017-0 - Special Protection System Maintenance and Testing into PRC-005-2 – Protection System Maintenance

Standard: PRC-005-1 - Transmission and Generation Protection System Maintenance and Testing		
Requirement in Approved Standard	Translation to New Standard or Other Action	Proposed Language in PRC-005-2 – Protection System Maintenance Or Comment
R1. Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System shall have a Protection System maintenance and testing program for Protection Systems that affect the reliability of the BES. The program shall include:	PRC-005-2, R1	<p>R1. Each Transmission Owner, Generator Owner, and Distribution Provider shall establish a Protection System Maintenance Program (PSMP) for its Protection Systems designed to provide protection for BES Element(s). The PSMP shall: <i>[Violation Risk Factor: Medium] [Time Horizon: Long Term Planning]</i></p> <p>1.1. Address all Protection System component types.</p> <p>1.2. Identify which maintenance method (time-based, performance-based (per PRC-005 Attachment A), or a combination) is used to address each Protection System component type. All batteries associated with the station dc supply component type of a Protection System shall be included in a time-based program as described in Table 1-4 and Table 3.</p> <p>1.3. Identify the associated maintenance intervals for time-based programs, to be no less frequent than the intervals established in Table 1-1 through 1-5, Table 2, and Table 3.</p> <p>1.4. Include all applicable monitoring attributes and related maintenance activities applied to each Protection System component type consistent with the maintenance intervals specified in Tables 1-1 through 1-5, Table 2, and Table3.</p>

Standard: PRC-005-1 - Transmission and Generation Protection System Maintenance and Testing

Requirement in Approved Standard	Translation to New Standard or Other Action	Proposed Language in PRC-005-2 – Protection System Maintenance Or Comment
<p>R1.1. Maintenance and testing intervals and their basis.</p> <p>R1.2. Summary of maintenance and testing procedures.</p>	<p>PRC-005-2, Tables 1-1 through 1-5 and Table 2.</p>	<p>See Tables 1-1 through 1-5 and Table 2. The Tables establish prescribed maximum intervals and minimum maintenance activities.</p>
<p>R2. Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System shall provide documentation of its Protection System maintenance and testing program and the implementation of that program to its Regional Reliability Organization on request (within 30 calendar days). The documentation of the program implementation shall include:</p>	<p>PRC-005-2, R3</p>	<p>R3. Each Transmission Owner, Generator Owner, and Distribution Provider shall implement and follow its PSMP and initiate resolution of any unresolved maintenance issues.</p>
<p>R2.1. Evidence Protection System devices were maintained and tested within the defined intervals.</p> <p>R2.2. Date each Protection System device was last tested/maintained.</p>	<p>PRC-005-2, M3</p>	<p>M3. Each Transmission Owner, Generator Owner, and Distribution Provider shall have evidence that it has implemented the Protection System Maintenance Program and initiated resolution of unresolved maintenance issues in accordance with Requirement R3, which may include but is not limited to dated maintenance records, dated maintenance summaries, dated check-off lists, dated inspection records, or dated work orders.</p>

**Standard: PRC-008-0 - Implementation and Documentation of Underfrequency Load Shedding
Equipment Maintenance Program**

Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
<p>R1. The Transmission Owner and Distribution Provider with a UFLS program (as required by its Regional Reliability Organization) shall have a UFLS equipment maintenance and testing program in place. This UFLS equipment maintenance and testing program shall include UFLS equipment identification, the schedule for UFLS equipment testing, and the schedule for UFLS equipment maintenance.</p>	<p>PRC-005-2, R1, R2, R3, and Applicability 4.2.2</p> <p>Tables 1-1 – 1-5 and Table 3</p>	<p>See PRC-005-2.</p> <p>Each Transmission Owner and Distribution Provider that owns an underfrequency load-shedding system, (UFLS) as established by Regional underfrequency load-shedding requirements, shall establish and document a Protection System maintenance program for that underfrequency load-shedding system. The program may be time-based, performance-based, or a combination thereof, and must address all Protection System components that are used within the underfrequency load shedding system. Batteries must be maintained via a time-based program.</p>
<p>R2. The Transmission Owner and Distribution Provider with a UFLS program (as required by its Regional Reliability Organization) shall implement its UFLS equipment maintenance and testing program and shall provide UFLS maintenance and testing program results to its Regional Reliability Organization and NERC on request (within 30 calendar days).</p>	<p>PRC-005-2, R3</p>	<p>R3. Each Transmission Owner, Generator Owner, and Distribution Provider shall implement and follow its PSMP and initiate resolution of any unresolved maintenance issues.</p> <p>Each Transmission Owner and Distribution Provider that owns an underfrequency load-shedding system, (UFLS) as established by Regional underfrequency load-shedding requirements, shall establish and document a Protection System maintenance program for that underfrequency load-shedding system. The program may be time-based, performance-based, or a combination thereof, and must address all Protection System components that are used within the underfrequency load shedding system. Batteries must be maintained via a time-based program.</p>

Standard: PRC-017-0 - Special Protection System Maintenance and Testing

Requirement in Approved Standard	Translation to New Standard or Other Action	Comments
<p>R1. The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall have a system maintenance and testing program(s) in place. The program(s) shall include:</p> <p>R1.1. SPS identification shall include but is not limited to:</p> <p>R1.1.1. Relays.</p> <p>R1.1.2. Instrument transformers.</p> <p>R1.1.3. Communications systems, where appropriate.</p> <p>R1.1.4. Batteries.</p> <p>R1.2. Documentation of maintenance and testing intervals and their basis.</p> <p>R1.3. Summary of testing procedure.</p> <p>R1.4. Schedule for system testing.</p> <p>R1.5. Schedule for system maintenance.</p> <p>R1.6. Date last tested/maintained.</p>	<p>PRC-005-2, R1, R2, R3, and Applicability 4.2.4</p> <p>Tables 1-1 through 1-5 and Table 2.</p>	<p>See PRC-005-2.</p> <p>Each Transmission Owner, Generator Owner, and Distribution Provider that owns a Special Protection System, or portion thereof, for Bulk Electric System reliability shall establish and document a Protection System Maintenance program for their portion of that Special Protection System. The program may be time-based, performance-based, or a combination thereof, and must address all components that are used within the Special Protection System. Batteries must be maintained according to the time-based program.</p>
<p>R2. The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall provide documentation of the program and its implementation to the appropriate Regional Reliability Organizations and NERC on request (within 30 calendar days).</p>	<p>PRC-005-2, M3</p>	<p>M3. Each Transmission Owner, Generator Owner, and Distribution Provider shall have evidence that it has implemented the Protection System Maintenance Program and initiated resolution of unresolved maintenance issues in accordance with Requirement R3, which may include but is not limited to dated maintenance records, dated maintenance summaries, dated check-off lists, dated inspection records, or dated work orders.</p>