

**Status of Addressing Issues (identified by FERC and stakeholders) Associated with PRC-005-1, PRC-008-0, PRC-011-0 and PRC-017-0**

PRC-005-1 — Transmission and Generation Protection System Maintenance and Testing		
Source	Language	Drafting Team Resolution
FERC Order 693	Maintenance and testing of a protection system must be carried out within a maximum allowable time interval that is appropriate for the type of protection system and its impact on the reliability of the bulk power system.	Specific time intervals are included in the draft standard. The justification for the intervals is provided in the supplemental reference document.
FERC Order 693	Consider FirstEnergy's and ISO-NE's suggestions to combine PRC-005, PRC-008, PRC-011, and PRC-017 into a single standard.	This suggestion is being used.
NERC Audit Observation Team	How do you verify compliance for for cts/pts? How do you audit these within a scheduled maintenance program. As part of the procedure, most have accepted visual inspection. Some entities state that testing of the relays verify functionality of the ct/p	Records must be maintained -- records only means of proof if was done. Verification activities in Table 1 establish the activities required for CTs/PTs.
Version 0 Team	Not a standalone standard	Being combined with three other standards all addressing maintenance of protection systems.
Version 0 Team	Include breakers/switches in list	Breakers are specifically NOT included in the Protection System definition, and therefore are NOT addressed in the draft standard.
Version 0 Team	Define evidence	Requirement R4 established that the program must be implemented. Evidence that the program is implemented is a measure; evidence is not discussed in requirements.

**PRC-005-1 — Transmission and Generation Protection System Maintenance and Testing**

Source	Language	Drafting Team Resolution
NERC Audit Observation Team	Determine what on schedule means. Is an entity who maintained/tested 95% of their relays at the same level of non-compliance as an entity who maintained/tested 10% of their relays?	100% compliance is required - violation severity levels to address time. Will consider implementation of this observation when developing compliance elements.
NERC Audit Observation Team	As applicable, each TO, DP and GOP shall have a protection system maintenance and testing program for protection systems that affect the reliability of the BES. Does this include major equipment like circuit breakers and transformers?	Yes – the proposed standard does include protection systems for breakers and transformers.  Breakers are specifically NOT included in the Protection System definition, and therefore are NOT addressed as components of Protection Systems.
NERC Audit Observation Team	How do you verify DC control power? All regions require functional testing of the breaker. This should include functional relay & station battery checks, including breaker tripping, not just a visual inspection.	Specific verification activities are established in Table 1 and more details are provided in the supplemental reference.
Phase III/IV Team	All protection systems on the bulk electric system.	The applicability section addresses Protection Systems that are "applied on, or designed to protect the BES", and provides additional specificity regarding applicable generator Protection Systems
Phase III/IV Team	PRC 003 to 005 only address generator (and transmission) protective systems, without defining this term.	The applicability section addresses Protection Systems that are "applied on, or designed to protect the BES", and provides additional specificity regarding applicable generator Protection Systems
Phase III/IV Team	Need to add language to ensure the Regional Requirements focus on the most impactful scenarios	The draft standard established minimum ERO-wide requirements; any Regional requirements would have to exceed the ERO requirements.
Phase III/IV Team	Modify applicability to clarify that the requirements are applicable to the following:	See the applicability section of the standard.

**PRC-005-1 — Transmission and Generation Protection System Maintenance and Testing**

<b>Source</b>	<b>Language</b>	<b>Drafting Team Resolution</b>
Phase III/IV Team	All generation protection systems whose misoperations impact the bulk electric system	Specificity is provided in 4.2.5 addressing generator Protection Systems
Phase III/IV Team	There is no performance requirement or measure of effectiveness of a maintenance program required by the standard	For Time-Based (or Condition-Based) maintenance, minimum activities and maximum intervals are specified; for performance-based maintenance, performance (or effectiveness) goals are established.

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

Source	Language	Drafting Team Resolution
FERC Order 693	Maintenance and testing of a protection system must be carried out within a maximum allowable time interval that is appropriate for the type of protection system and its impact on the reliability of the bulk power system.	Specific time intervals are included in the draft standard.
Version 0 Team	Definition of evidence required	Requirement R4 established that the program must be implemented. Evidence that the program is implemented is a measure; evidence is not discussed in requirements.
Version 0 Team	Consistent wording from standard to standard required	Combining maintenance standards and being careful to do this.
Fill in the Blank Team	Okay if PRC-006 is fixed	Applicability section of PRC-005-2 (4.2.2) establishes applicability to UFLS established in accordance with ERO requirements.

**PRC-011-0 — Undervoltage Load Shedding System Maintenance and Testing**

Source	Language	Drafting Team Resolution
FERC Order 693	Maintenance and testing of a protection system must be carried out within a maximum allowable time interval that is appropriate for the type of protection system and its impact on the reliability of the bulk power system.	Specific time intervals are included in the draft standard.
Version 0 Team	Exemptions for those with shunt reactors	UV Relays on shunt reactors are not UVLS; these relays would be included as pertinent to relays "applied on or to protect the BES".
Version 0 Team	Define evidence	Requirement R4 established that the program must be implemented. Evidence that the program is implemented is a measure; evidence is not discussed in requirements.

**PRC-017-0 — Special Protection System Maintenance and Testing**

Source	Language	Drafting Team Resolution
FERC Order 693	Require that documentation identified in requirement R2 be routinely provided to NERC or the regional entity.	Language to be addressed in the compliance section of the standard.
FERC Order 693	Maintenance and testing of a protection system must be carried out within a maximum allowable time interval that is appropriate for the type of protection system and its impact on the reliability of the bulk power system.	Table 1 establishes maximum allowable maintenance intervals, with different intervals for different technologies of protective system equipment, and for different components defined within "Protection System"
Version 0 Team	Need to retain two dates	Not sure what this is.
Version 0 Team	Define evidence	Requirement R4 established that the program must be implemented. Evidence that the program is implemented is a measure; evidence is not discussed in requirements.