E-mail completed form to
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Standard Authorization Request Form

Request Date	January 17, 2013

SAR Requester Information	**SAR Type** (*Check a box for each one that applies.*)	
Individual, Group, or Committee Name Protection System Maintenance Standard Drafting Team	☐	New Standard
Primary Contact (if Group or Committee) Charles Rogers	☒	Revision to existing Standard
Company or Group Name Chairman, Protection System Maintenance Standard Drafting Team	☐	Withdrawal of existing Standard
E-mail Charles.Rogers@cmsenergy.com	☐	Project Identified in Reliability Standards Development Plan (Project Number and Name:)
Telephone 517-788-0027	☒	Modification to NERC Glossary term or addition of new term

Brief Description of Proposed Standard Modifications/Actions (In three sentences or less, summarize the proposed actions a drafting team will be responsible for implementing.)

The Standard Drafting Team shall modify NERC Standard PRC-005-2 to explicitly address the maintenance and testing of reclosing relays which can affect the reliable operation of the Bulk Electric System.

The Standard Drafting Team shall not make general revisions to the standard in content or arrangement.

Need (Explain why the Standard is being developed or modified. Clearly indicate why the actions being proposed are needed for maintaining or improving bulk power system reliability, including an assessment of the reliability and market interface impacts. This is similar to the Purpose statement in a Reliability Standard.)

Reclosing relays are applied to facilitate automatic restoration of system components following a Protection System operation. In certain circumstances the misoperation of reclosing relays can impact the reliability of the Bulk Electric System. The Federal Energy Regulatory Commission, in paragraphs 16-27 of Order No. 758, directed that NERC include reclosing relays that "can affect the reliable operation of the Bulk-Power System" within NERC Standard PRC-005

Modifying the standard in this fashion will impact Bulk Electric System (BES) reliability by assuring that the reclosing relays (installed to meet performance goals of approved NERC Standards) are properly maintained so that they may be expected to perform properly.

No market interface impacts are anticipated.

Goals (Describe what must be accomplished in order to meet the above need. This section would become the Requirements in a Reliability Standard.)

The revision to PRC-005-2 may require that the definition of Protection System be revised to add reclosing relays.

The Applicability section of the Standard must be modified to describe explicitly those devices that entities are to maintain in accordance with the revised standard.

The Tables of minimum maintenance activities and maximum maintenance intervals will require modification to include appropriate intervals and activities.

Finally, the informative Supplementary Reference Document (provided as a technical reference for PRC-005-2) should be modified to provide the rationale for the maintenance activities and intervals within the modified standard, as well as to provide application guidance to industry.

Objectives and/or Potential Future Metrics (Describe what the potential measure or criteria for success may be for determining the successful implementation of this request. Provide ideas for potential metrics to be developed and monitored in the future relative to this request, if any.)

Successful implementation of the modified standard will assure that the devices being added will perform as needed for the conditions anticipated by those performance requirements.

Detailed Description (In three paragraphs or more, provide a detailed description of the proposed actions a drafting team will be responsible for executing so that the team can efficiently implement this request. While you will check applicability boxes on the following page, this description must include proportional identification of to whom the standard should apply among industry participants.)

The drafting team shall:

1. **Consider revision of the title of the Standard to appropriately address the added devices.**
2. **Modify the Purpose of the Standard as necessary to address reclosing relays.**
3. **Consider modification of the definition of Protection System to add reclosing relays.**
4. **Modify the Applicability section of PRC-005-2 to describe explicitly those devices that entities are to maintain in accordance with the revised standard.**
5. **Modify the Tables within PRC-005-2 to include maximum intervals and minimum activities appropriate for the devices being addressed, with consideration for the technology of the devices and for any condition monitoring that may be in place for those devices.**
6. **Modify the Measures and Violation Severity Levels as necessary to address the modified requirements.**
7. **Modify the informative Supplementary Reference Document (provided as a technical reference for PRC-005-2) to provide the rationale for the maintenance activities and intervals within the modified standard, as well as to provide application guidance to industry.**

OPTIONAL: Technical Analysis Performed to Support Justification (Provide the results of any technical study or analysis performed to justify this request. Alternatively, if deemed necessary, propose a technical study or analysis that should be performed prior to a related standard development project being initiated in response to this request.)

The NERC System Analysis and Modeling Subcommittee (SAMS) and System Protection and Control Subcommittee (SPCS) have jointly performed a technical study to determine which reclosing relays should be addressed within PRC-005 and provide advice regarding appropriate maintenance intervals and activities for those relays. The related report was approved by the NERC Planning Committee on November 14, 2012.

The Standard Drafting Team shall use this report as an aid in developing appropriate revisions to PRC-005-2.

Reliability Functions

The Standard(s) May Apply to the Following Functions *(Check box for each one that applies.)*		
☐	Regional Entity	Conducts the regional activities related to planning and operations, and coordinates activities of Responsible Entities to secure the reliability of the Bulk Electric System within the region and adjacent regions.
☐	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
☐	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
☐	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
☐	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
☐	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator area.
☐	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
☐	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☒	Transmission Owner	Owns and maintains transmission facilities.
☐	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☒	Distribution Provider	Delivers electrical energy to the End-use customer.
☒	Generator Owner	Owns and maintains generation facilities.
☐	Generator Operator	Operates generation unit(s) to provide real and reactive power.

☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☐	Market Operator	Interface point for reliability functions with commercial functions.
☐	Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

Reliability and Market Interface Principles

Applicable Reliability Principles *(Check box for all that apply.)*	
☒	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
☐	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☐	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
☒	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
☒	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
☐	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☐	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
☐	8. Bulk power systems shall be protected from malicious physical or cyber attacks.
Does the proposed Standard(s) comply with all of the following Market Interface Principles? *(Select 'yes' or 'no' from the drop-down box.)*	
1. A reliability standard shall not give any market participant an unfair competitive advantage. Yes	
2. A reliability standard shall neither mandate nor prohibit any specific market structure. Yes	

3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. Yes
4. A reliability standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes

Related Standards

Standard No.	Explanation
NONE	

Related Projects

Project ID and Title	Explanation
NONE	

Regional Variances

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	