Standard Authorization Request Form

Request Date	May 10, 2012

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 PRC-005-2 – Protection System Maintenance
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: Project 2007-17 Protection System Maintenance and Testing
Telephone 517-788-0027	☒	Modification to NERC Glossary term or addition of new term Protection System

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 add reclosing relays to the standard. In order to do so, the definition of Protection System shall be revised to include reclosing relays, the Facilities portion of the Applicability of the Standard shall be revised to describe those reclosing relays that are included within the standard, and appropriate minimum maintenance intervals (with maximum allowable intervals) shall be added to the standard. The Standard Drafting Team shall also make any other changes that are necessary to explicitly address reclosing relays, but shall not make general revisions to the standard, either 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 power system fault. While reclosing relays are often applied to benefit customer service, they are also applied to benefit 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 that are installed to meet performance goals of approved NERC Standards, as well as those whose improper operation would adversely affect BES reliability, 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 will require that the definition of Protection System be revised to add reclosing relays to the components of this definition. The Facilities portion of the Applicability of the Standard must be modified to describe explicitly those reclosing relays 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 intervals and activities appropriate for reclosing relays. 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 reclosing relays, when installed to meet performance requirements of other approved NERC standard, will perform as needed for the conditions anticipated by those performance requirements, and that reclosing relays will not mal-perform in a fashion that would cause adverse BES impacts. Future performance metrics could address successful automatic system restoration as anticipated by approved NERC standards, and also address improper attempted automatic system restoration that adversely impacts the BES.

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. Modify the definition of Protection System to add reclosing relays.
2. Modify the Facilities portion of the Applicability of PRC-005-2 to describe explicitly those reclosing relays that entities are to maintain in accordance with the revised standard.
3. Modify the Tables within PRC-005-2 to include intervals and activities appropriate for reclosing relays, with consideration for the technology of the reclosing relays and for any condition monitoring that may be in place on the relays
4. Modify Table 1-5 of PRC-005-2 to include the control circuitry associated with reclosing relays being addressed.
5. Modify the Measures and Violation Severity Levels as necessary to address the modified requirements.
6. 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.)

No technical analysis has been performed, nor is any being proposed.

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	Develops a >one year plan for the resource adequacy of its

	Planner	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	