

Meeting Notes

Project 2007-17.2 Protection System Maintenance and Testing: Phase 2 (Reclosing Relays) Standard Drafting Team

February 26-28, 2013

Oncor Electric Delivery
Ft. Worth, TX

Administrative

1. Introductions

The meeting was brought to order by Charles Rogers, chair, at 8:01 a.m. CT on Tuesday, February 26, 2013. Mr. Rogers asked for introductions and to confirm quorum. Those in attendance were:

Name	Company	Member/ Observer	In-person (IP) or Remote (R)		
			2/26	2/27	2/28
Charles Rogers (Chair)	Consumers Electric	Member	IP	IP	IP
Forrest Brock	Western Farmers Electric Cooperative	Member	IP	IP	IP
Aaron Feathers	Pacific Gas and Electric Company	Member	IP	IP	IP
Samuel Francis	Oncor Electric Delivery	Member	IP	IP	IP
Russell Hardison, P.E.	Tennessee Valley Authority	Member	IP	IP	
Ervin Harper	NRG Texas Maintenance Services	Member	IP	IP	IP
James M. Kinney	FirstEnergy Corporation	Member	IP	IP	IP
Mark Lukas	Commonwealth Edison Co.	Member	IP	IP	IP
Michael Palusso	Southern California Edison	Member	R	R	R
John Schechter	American Electric Power	Member	R		

Name	Company	Member/ Observer	In-person (IP) or Remote (R)		
			2/26	2/27	2/28
William D. Schultz	Southern Company Services	Member	IP	IP	
Philip B. Winston	Southern Company	Member	IP	IP	
David Youngblood	Luminant Energy	Member	IP	IP	IP
John Zipp	ITC Holdings	Member	IP	IP	IP
Kevin Harris	Northeast Utilities	Observer	IP	IP	IP
Joe Livingston	Great River Energy	Observer	IP	IP	IP
Robert Preston Lloyd	Southern California Edison	Observer	IP	IP	IP
Mike Miller		Observer	R		
Mike Gerken	Northeast Utilities	Observer	IP	IP	IP
Tom Bradish	Federal Energy Regulatory Commission	Observer	IP	IP	IP
Scott Barfield-McGinnis (Standards Developer)	North American Electric Reliability Corporation	Observer	IP	IP	IP
Bill Edwards (Attorney)	North American Electric Reliability Corporation	Observer	R	R	
Al McMeekin (Standards Developer)	North American Electric Reliability Corporation	Member	IP	IP	IP

2. Determination of Quorum

The rule for NERC Standard Drafting Team (SDT or team) states that a quorum requires two-thirds of the voting members of the SDT. Quorum was achieved as 14 of the 21 members were present.

3. NERC Antitrust Compliance Guidelines and Public Announcement

NERC Antitrust Compliance Guidelines and public announcement were reviewed by Al McMeekin. On Wednesday and Thursday, Mr. Rogers reminded the participants that the group remained under the NERC Antitrust Guidelines and public participation disclaimer. There were no questions raised.

4. Roster updates

Mr. McMeekin noted there had been changes to the roster. Two members (Bob Bentert and Mark Peterson) had resigned from the team. The group recognized that this meeting would be David Youngblood's last due to his upcoming retirement. Phil Winston noted that the SDT needed to communicate with Eric Udren regarding his intention to continue participation on the team. Because of the technical expertise already represented by the existing members of an already large drafting team, and the small project scope, Mr. McMeekin recommended not soliciting replacement members but welcomed the participation of observers. Mr. Rogers concurred.

Agenda

1. Review of development since last meeting

a. Order 758 Informational Filing

Mr. McMeekin reviewed Order 758 and the informational filing submitted by NERC legal staff as directed by Order 758 on July 30, 2012.

Mr. McMeekin asked Bill Edwards to provide an update on the previous PSMT SDT project filing. Mr. Edwards praised the team's preparatory work on the filing and stated it would be filed with the regulators that day.

b. Standard Authorization Request (SAR)

Mr. Rogers reviewed the project SAR and the criteria and elements. Most specifically, the SDT 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 (BES). The SDT shall not make general revisions to the standard in content or arrangement.

Also, the SAR directs the PSMT SDT do the following:

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 (VSLs) as necessary to address the modified requirements.

7. Modify the informative Supplementary Reference Document¹ (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.
- c. Consideration for Maintenance and Testing of Autoreclosing Schemes² (“SAMS/SPCS technical document”).

Mr. Rogers asked Mr. Winston to provide a synopsis of the SAMS/SPCS technical document. Mr. Winston covered the following: SAMS and SPCS recommended the following guidance for development of NERC Reliability Standard PRC-005, Transmission and Generation Protection System Maintenance and Testing, to address the concerns stated in FERC Order No. 758 regarding autoreclosing.

1. Modify PRC-005 to explicitly address maintenance and testing of autoreclosing relays applied as an integral part of a SPS.
2. Modify PRC-005 to include maintenance and testing of autoreclosing relays at or in proximity to generating plants at which the total installed capacity is greater than the capacity of the largest generating unit within the Balancing Authority Area.
 - In this context, define proximity as substations one bus away if the substation is within 10 miles of the plant.
 - Include a provision to exclude autoreclosing relays if the equipment owner can demonstrate to the Transmission Planner that a close-in three-phase fault for twice the normal clearing time (capturing a minimum trip-close-trip time delay) does not result in a total loss of generation in the interconnection exceeding the largest unit within the Balancing Authority Area where the autoreclosing is applied.
3. Base minimum maintenance activities and maximum intervals on the activities and intervals in PRC-005-2
 - Develop minimum maintenance activities and maximum intervals for autoreclosing relays similar to Table 1-1.
 - Develop minimum maintenance activities and maximum intervals for control circuitry of autoreclosing schemes similar to Table 1-5.
 - For the purpose of PRC-005, define control circuitry of autoreclosing schemes as: “Control circuitry associated with autoreclosing schemes including the close coil, but excluding breaker internal controls such as anti-pump and various interlock circuits.”

¹ Project 2007-17 Protection System Maintenance, Supplementary Reference and FAQ, PRC-005-2 Protection System Maintenance, Protection System Maintenance and Testing Standard Drafting Team, October 2012.

² Consideration for Maintenance and Testing of Autoreclosing Schemes, NERC System Analysis and Modeling Subcommittee and System Protection and Control Subcommittee, November 2012.

d. Project Schedule

The team reviewed the project schedule and the anticipated comment and ballot periods. Minor adjustments were made to the schedule. Mr. Winston expressed that not having an informal comment period would save 60 days in the schedule. The inclusion of autoreclosing systems within PRC-005-3 should not create much issue within the industry. Based on the schedule, the team will schedule a meeting late May or early June 2013.

e. Draft standards development (See item #2 below)

2. Prepare draft standard and associated documents

a. Standard

The team agreed with the approach adding “and Reclosing System” in the currently adopted version of PRC-005-2. One member suggested modifying the definition of Protection System rather than making an insertion to the definition of Protection System Maintenance Program (PSMP). Another team member responded that any changes made to the Protection System definition must be balloted and approved by the stakeholders as well; so a more timely approach would be to establish an independent definition of Reclosing System within the standard and amend the existing definition of PSMP to pertain to this standard. The member further questioned if “automatic” is appropriate within the definition. After discussing this, the team decided to add “automatic” immediately prior to the proposed term “Reclosing System” to be “Automatic Reclosing System” but after further discussion, the team removed the word “System.” The new term “Automatic Reclosing” was the team consensus and changes were made within the standard to comport.

The team discussed the implications of attempting to define a “system” when it is actual components that need to be tested. The team decided that only the reclosing relay and its associated circuitry need to be within the purview of the standard. Based on the discussion, the team agreed that the definition should be changed to the following:

- Automatic Reclosing –
 - Reclosing relay
 - Control circuitry associated with the reclosing relay through the close coil(s) of the circuit breakers or similar device, but excluding breaker internal controls such as anti-pump and various interlock circuits.

The team considered the remaining definitions; Unresolved Maintenance Issue, Segment, Component, Component Type, and Countable Event. The latter four definitions were all modified to account for the inclusion of “Automatic Reclosing”.

The team decided to change the Purpose of the standard. The team inserted the term “Automatic Reclosing” into the Purpose, and removed the second occurrence of “Protection System”, replacing it with “they” for clarity.

The team moved into the requirements for discussion. Changes included inserting “Automatic Reclosing” in the appropriate places in Requirement R1, Parts 1.1 and 1.2, R3, and R4. The team added “Table 4” in Part 1.2 to address the addition of the new table.

The team reviewed and amended Measures M1, M3, and M4 which only required changes to insert “Automatic Reclosing.”

The team reviewed and amended the VSLs to comport with the changes to the Requirements.

- Tables –
 - Existing Tables 1-1 through 1-5, 2, and 3 were not modified as a part of this standard revision. Table 4 was added to address the inclusion of Automatic Reclosing. Table 4 is based on the existing Tables as follows:

New Table 4 Row	Existing Table Row
Table 4, Row 1	Table 3, Row 1
Table 4, Row 2	Table 3, Row 2
Table 4, Row 3	Table 1-5, Row 4
Table 4, Row 4	Table 3, Row 9

- Various maintenance activities were added to Table 4. One member questioned why closing coils were specially referenced in the control circuitry. The team debated and agreed that the closing coil was not specifically correct. To address this, the team updated the maintenance activity to include: “Verify the Automatic Reclosing control path including the close coil.” Also, the team moved this activity from the six year interval to the 12 year interval to comport with the SAMS/SPCS technical document. The team reviewed Attachment A for consistency with the changes made within the standard.

The team added section 4.2.6 Automatic Reclosing with two subheadings 4.2.6.1 and 4.2.6.2 to address total plant capacity and circuit-miles, respectively. A third 4.2.6.3 was added to address Special Protection Systems (SPS). One member raised a concern that the new 4.2.6.1 may include not BES Elements, such as, 69 kV substation that are one bus away from generating plants meeting the criteria in 4.2.6.1. The team discussed and reached consensus on adding “Applied on BES Elements at substations...” to address this concern.

b. Implementation Plan

The team discussed the implementation with respect to the version-two standard which was filed with FERC on February 26, 2013.³ After consulting with Mr. Edwards, NERC legal staff, the team decided to augment the PRC-005-2 Implementation Plan by incorporating the elements of Automatic Reclosing contained in PRC-005-3.

c. Supplemental Reference FAQ

The team made changes to the document to comport with the addition of Automatic Reclosing to the proposed standard PRC-005-3. There were no controversial issues with revising the Supplemental Reference FAQ document.

d. Consideration of Directives and Issues

The team addressed the one directive from Order No. 758, paragraph 27.

e. Violation Risk Factor (VRF)/VSL Justification

The team created a new document based on the previously-approved PRC-005-2 document.

3. **Develop introductory language and posting questions**

The team prepared questions regarding the proposed revisions to draft 1 of PRC-005-3.

The team prepared questions for the SAR which addresses regulatory directives in Order No. 758.

4. Action Items

Response to Comments assignments were made as follows:

- a. Standard Q1 – Forrest Brock, Russell Hardison, Mark Lucas, and John Zipp
- b. Standard Q2 – Bill Shultz, Aaron Feathers, Mr. Gerken, and Sam Francis
- c. SAR – Mr. Rogers and Mr. Winston

5. **Next Steps**

The standard will be posted for a 45-day formal comment period with a concurrent initial ballot in the final 10 days.

6. **Future meeting(s)**

A meeting was scheduled for June 11-13, 2013 | Location to be determined

7. **Adjourn**

The meeting adjourned at 10:10 a.m. CT on February 28, 2013.

³ http://www.nerc.com/files/FINAL_PRC-005-2_Petition_complete.pdf