Unofficial Comment Form

Project 2007-17.3 Protection System Maintenance and Testing – Phase 3 (Sudden Pressure Relays)

Please DO NOT use this form for submitting comments. Please use the electronic form to submit comments on the draft PRC-005-X standard. The electronic comment form must be completed by 8:00 p.m. ET on Friday, September 12, 2014.

If you have questions please contact Jordan Mallory via email or by telephone at 404-446-9733.

The project page may be accessed by clicking here.

Background Information

Project 2007-17.3 (PRC-005-X) will address a directive from FERC Order No. 758, which accepted NERC’s proposal to develop a technical document, in lieu of a prescriptive FERC directive, that will provide the following information:

1) Describe the devices and functions (to include sudden pressure relays which trip for fault conditions) that should address FERC’s concern; and

2) Propose minimum maintenance activities for such devices and maximum maintenance intervals, including the technical basis for each.

In Order No. 758, the Commission accepted NERC’s proposal, by stating as follows:

NERC states that these technical documents will address those protective relays that are necessary for the reliable operation of the Bulk-Power System and will allow for differentiation between protective relays that detect faults from other devices that monitor the health of the individual equipment and are advisory in nature (e.g., oil temperature). Following development of the above-referenced document(s), NERC states that it will "propose a new or revised standard (e.g. PRC-005) using the NERC Reliability Standards development process to include maintenance of such devices, including establishment of minimum maintenance activities and maximum maintenance intervals." Accordingly, NERC proposes to "add this issue to the Reliability Standards issues database for inclusion in the list of issues to address the next time the PRC-005 standard is revised."

The Commission accepts NERC’s proposal, and directs NERC to file, within sixty days of publication of this Final Rule, a schedule for informational purposes regarding the development of the technical documents referenced above, including the identification of devices that are designed to sense or take action against any abnormal system condition that will affect reliable operation.
NERC shall include in the informational filing a schedule for the development of the changes to the standard that NERC stated it would propose as a result of the above-referenced documents. NERC should update its schedule when it files its annual work plan.

As a follow-up to this Commission ruling, the Planning Committee studied sudden pressure relays and issued the attached report, which recommends moving ahead with a Standard. Specifically, the System Protection and Control Subcommittee (SPCS) completed a technical report recommending that a standard drafting team modify PRC-005 to explicitly address maintenance and testing of the actuator device of the sudden pressure relay when applied as a protective device that trips a facility described in the applicability section of the Reliability Standard. Additionally, the standard drafting team (SDT) intends to consider changes to the standard that provide consistency and alignment with other Reliability Standards. Lastly, the SDT intends to modify the standard to address any directives issued by FERC related to the approval of PRC-005-3, which is pending filing with FERC.

**PRC-005-X Revisions for draft 2:**
The SDT made four (4) significant revisions to this draft of PRC-005-X and below provides a high level list of the changes:

1. After considering industry comments, which included various alternatives and much discussion within the SDT, Requirement R6 and all associated references to Requirement R6 were removed from the standard. Associated with this change the following response was provided to several commenters: “The Automatic Reclosing equipment ‘owner’ is responsible for identifying Automatic Reclosing Components that must be included in their PSMP. The SDT eliminated Requirement R6; therefore, the owner is responsible for obtaining the largest generating unit information.”

2. Table 5:
   a. The header for Table 5 was modified to include the following:
      
      Note: In cases where Components of Sudden Pressure Relaying are common to Components listed in Table 1-5, the Components only need to be tested once during a distinct maintenance interval.

   b. An additional two rows were added to Table 5 to include ‘Electromechanical lockout devices which are directly in a trip path from the fault pressure relay to the interrupting device trip coil (regardless of any monitoring of the control circuitry)’ and ‘Control circuitry associated with Sudden Pressure Relaying whose integrity is monitored and alarmed (See Table 2).’

3. Section 4.2.6.1 of the Applicability was revised to address situations where Balancing Authorities participate in a Reserve Sharing Group (RSG). In these cases, a group of Balancing Authorities share reserves to cover any contingency within the boundaries of the group; therefore, generation loss within a RSG would not impact reliability of the Bulk-Power System unless the aggregate capacity loss exceeds the largest unit within the RSG. This change was discussed with SAMS and SPCS to
confirm consistency with the rationale described in the SAMS-SPCS report for basing applicability on the largest unit in the Balancing Authority Area. As such, the references to the largest BES generating unit within the Balancing Authority Area were changed to the largest BES generating unit within the Balancing Authority Area or, if a member of a RSG, the largest generating unit within the RSG. Additionally, a footnote has been added to advise that the entity’s PSMP needs to remain current regarding the applicability of Automatic Reclosing Components relative to the largest generating unit within the Balancing Authority Area or RSG.

4. In the last posting, the SDT included language in the standard that required completion of maintenance activities within three years for newly-identified Automatic Reclosing Components following a notification under Requirement R6, which has been removed. After further discussion, the SDT determined that a separate shorter timeframe for maintenance of newly-identified Automatic Reclosing Components created unnecessary complication within the standard. The SDT determined that entities should maintain Automatic Reclosing Components subject to the standard, according to the timeframes in the maintenance tables. Therefore, Part 3.1, Part 4.1, and their subparts have been removed.

Several smaller additions/changes were made including the following:

1. Sudden Pressure Relaying was added to Facilities Section 4.2.5.3.

2. Several references of Section 4.2.7 were corrected to 4.2.6 since the Applicability section does not contain a Section 4.2.7.

3. The Evidence Retention section for Requirement R2 was modified to include two different scenarios as follows: “in cases where the interval of the maintenance activity is longer than the audit cycle, and ‘In cases where the interval of the maintenance activity is shorter than the audit cycle.”

4. The SDT made changes to the Supplementary Reference and FAQ Document to reflect the changes in the Standard.

5. References to Special Protection System (SPS) were changed to reference Remedial Action Scheme (RAS) due to the fact that the SDT addressing this issue has proposed that terminology for future use.
Question

1. Do you agree with the removal of Requirement R6 from PRC-005-X? If no, please provide comments.

☐ Yes
☐ No

Comments: The deleted R6 should have been shown in the PRC-005-X posted redline.

2. Do you agree with the changes made to Table 5? If no, please provide comments.

☐ Yes
☐ No

Comments: The wording in the note added to the title box of Table 5 is confusing. It refers to Table 1-5, yet in the title box for Table 1-5 it states that Sudden Pressure Relaying is excluded.

3. Do you agree with the changes made to the data retention section in PRC-005-X? If no, please provide comments.

☐ Yes
☐ No

Comments: This is assuming that the data retention section referred to in the question and the standard’s 1.2 Evidence Retention are one in the same.

4. Do you agree with the deletions of the Parts and sub-parts from Requirement R3 and Requirement R4? If no, please provide comments.

☐ Yes
☐ No

Comments:
5. Do you have any comments regarding the changes made to the Supplementary Reference and FAQ Document to reflect the changes to PRC-005-X?

☑ Yes
☐ No

Comments: Regarding the sync-check relays mentioned in 2.4.1 Frequently Asked Questions:, because their operation is reliant upon voltage inputs, sync-check relay maintenance must be addressed in the tables, specifically maintenance done with voltages applied. Table 4-2(b) addresses control circuit paths, but verifying a control circuit path could be done by manually blocking contacts closed.

6. Do you have any additional comments not addressed by one of the previous questions?

☑ Yes
☐ No

Comments: The title box for Table 1-5 refers to “...Automatic Reclosing (see Table 4)...” There is no Table 4. It should be reworded to read “Tables 4-1 through 4-2” as it reads in the title box for Table 2.

The many tables and cross references between the tables in the standard make the standard difficult to use. Reorganizing the tables, possibly having one table per component type with component attributes listed should be considered.