

# 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 PER-005-2 standard. The electronic comment form must be completed by 8:00 p.m. ET on **Friday, June 2, 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 standards drafting team 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 1:**

The Standard Drafting Team has made several significant revisions to PRC-005-3 in establishing this draft of PRC-005-X.

1. In response to Order 758, the Standard Drafting Team (SDT) added Sudden Pressure Relaying by:
  - a. Defining a new term
  - b. Modified Protection System Maintenance Program (PSMP) definition to add Sudden Pressure Relaying
  - c. Revising the Applicability elements
  - d. Adding Table 5 to address minimum maintenance activities and maximum maintenance intervals
  - e. Revising the previous Implementation Plan
2. The SDT reconsidered its position on including Balancing Authorities to PRC-005-4; therefore, the SDT:
  - a. Added the Balancing Authority to the Applicability
  - b. Added a requirement that Balancing Authorities notify their Transmission Owners, Generator Owners, and Distribution Providers of the largest BES generating unit within the Balancing Authority Area.
  - c. Revised Requirements R3 and R4 to address the obligations previously expressed in the Implementation Plan regarding initial maintenance of Automatic Reclosing that becomes newly applicable at future times, and removed these elements from the Implementation Plan.
3. The SDT, seeing the concerns of the U.S. Office of Management and Budget and consulting with NERC Compliance Operations, reduced the required Data Retention.

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

### Question

1. Do you have any comments regarding the addition of Sudden Pressure Relaying to PRC-005-X?

- Yes  
 No

Comments: The definition of sudden pressure relaying is clear and limits the scope of the standard to relays that trip interrupting devices. However, Section 4.2 Facilities, 4.2.1 reads:

“Protection Systems and Sudden Pressure Relaying that are installed for the purpose of detecting Faults on BES Elements (lines, buses, transformers, etc.)”

This is confusing in that it refers to relays that detect faults regardless of whether they trip interrupting devices or not. Because Sudden Pressure Relays can be used just to alarm, suggest creating a new 4.2.x that says “Sudden Pressure Relaying installed for the purpose of detecting Faults and initiating the automatic operation of interrupting device(s) to isolate the equipment it is monitoring.”

In the Applicability Section, Items 4.2 and following should be removed and incorporated as definitions because the NERC Standard Processes Manual (Version 3.0, June 26, 2013, page 7) defines Applicability:

“Applicability: Identifies which entities are assigned reliability requirements. The specific Functional Entities and Facilities to which the Reliability Standard applies.”

From the NERC Glossary:

“Facility--A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.)”

2. Do you have any comments regarding the addition of Balancing Authority to PRC-005-X?

- Yes  
 No

Comments: We support the addition of the Balancing Authority to PRC-005-X. Transmission Owners, Generation Owners, and Distribution Providers should receive notification directly from the Balancing Authorities to accurately apply Section 4.2.6 Applicability. The Balancing Authority is the entity that

maintains the information and should have the responsibility to provide this information to the applicable entities. (Please see the Rationale box for R6 in the draft standard.) Transmission Owners, Generator Owners, and Distribution Providers should not be expected to monitor a database such as GADS or some other proposed list of all Balancing Authorities that identifies the largest BES generating unit within each Balancing Authority Area. The information should be provided directly to the Transmission Owners, Generator Owners, and Distribution Providers by their Balancing Authority.

The Standard Drafting Team should take advantage of the fact that even though the content of Rationale Boxes is not auditable, Rationale Boxes stay with the standard and can be used to convey information about a requirement, or section of a standard. For example, regarding the Rationale for R3 Part 3.1 and sub-Part 3.1.1, in addition to explaining whether the PSMP should be in the Standard or the Implementation Plan, it should also explain why newly identified Sudden Pressure Relaying is not included in the Parts and sub-Parts of R3.

3. Do you have any comments regarding the change in data retention to PRC-005-X?

- Yes  
 No

Comments:

4. 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:

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

- Yes  
 No

Comments: Because Automatic Reclosing and Sudden Pressure Relaying are terms likely to be used in other standards, their inclusion in the NERC Glossary should be considered to prevent confusion and ensure consistency.

The wording in the Rationale Box for R6 should reference Section 4.2.6, not Section 4.2.7. The footnote on page 4 also incorrectly references Section 4.2.7.

Sub-Parts 3.1.1, 3.1.2, 4.1.1, and 4.1.2 address time and documentation requirements. The Rationale Boxes for R3 and R4 explain the consideration of putting these sub-Parts in an implementation plan or within the standard. The requirements should address a standard of performance, not a time period to implement, not a statement to address the provision of documentation. The language should be moved to the Measures.

Requirements R3 and R4 are written specifically for Automatic Reclosing components. The rationale is because the BA may notify the TO of a new BES element subject to the Automatic Reclosing requirements. However, this process of notification is not unique to Automatic Reclosing. The RC may identify new BES elements a TO was not aware of due to a reconfiguration in another area. In these instances there should be some allowance to incorporate the new protection systems. The solution the SDT has developed for Automatic Reclosing could easily be expanded to include all Protection Systems, Automatic Reclosing and Sudden Pressure Relaying.