

Unofficial Comment Form for Protection System Maintenance and Testing (Project 2007-17)

Please **DO NOT** use this form. Please use the electronic comment form located at the link below to submit comments on the draft Protection System Maintenance and Testing.

Comments must be submitted by September 8, 2009. If you have questions please contact Al Calafiore at Al.Calafiore@nerc.net or by telephone at 678-524-1188.

http://www.nerc.com/filez/standards/Protection_System_Maintenance_Project_2007-17.html

Background Information:

The draft standard combines the previous standards, PRC-005-1 — Transmission and Generation Protection System Maintenance and Testing, PRC-008-0 — Underfrequency Load Shedding Equipment Maintenance Program, PRC-011-0 — UVLS System Maintenance and Testing, and PRC-017-0 — Special Protection System Maintenance and Testing. It also addresses FERC directives from FERC Order 693, including that NERC establish maximum allowable maintenance intervals.

In accordance with the FERC directive, this draft standard establishes requirements for a time-based maintenance program, where all relevant devices are maintained according to prescribed maximum intervals. It further establishes requirements for a condition-based maintenance program, where the hands-on maintenance intervals are adjusted to reflect the known and reported condition of the relevant devices, and for a performance-based maintenance program, where the hands-on maintenance intervals are adjusted to reflect the historical performance of the relevant devices.

1. The Standard Drafting Team proposes to change the name of the draft standard from "Protection System Maintenance and Testing" to "Protection System Maintenance", and to include testing as one component of "Protection System Maintenance Program", which will be a defined term. Do you agree? If not, please explain in the comment area.

Yes

No

Comments:

2. Within Table 1a, Table 1b, and Table 1c, the draft standard establishes specific minimum maintenance activities for the various types of devices defined within the definition of "Protection System". Do you agree with these minimum maintenance activities? If not, please explain in the comment area.

Yes

No

Comments:

A. (TH) In the tables the term "verification" should be switched with "check".

B. (TH) The verification activities include testing for "specific gravity" in batteries. Since "impedance testing" will give you the same results or similar results can an entity do "impedance tests" in place of "specific gravity tests?" If so, can the tables reflect this?

3. Within Table 1a, the draft standard establishes maximum allowable maintenance intervals for the various types of devices defined within the definition of "Protection System", where nothing is known about the in-service condition of the devices. Do you agree with these intervals? If not, please explain in the comment area.

Yes

No

Comments:

4. Within Tables 1b and 1c, the draft standard establishes parameters for condition-based maintenance, where the condition of the devices is known by means of monitoring within the substation or plant and the condition is reported. Do you agree with this approach? If not, please explain in the comment area.

Yes

No

Comments:

(CG) I agree with this approach; however, I think most entities will not see the advantage of condition-based maintenance until they can resolve any gaps in data retention.

If an entity was retaining a set of maintenance records but failed to include all the needed information as specified in this standard so they would need to adjust their maintenance procedure to collect all information and then they would need to wait for the entire retention period until they could start using the extended maintenance interval.

If an entity had a collateral set of records which verified the information that lacked in the original maintenance record then could the entity start using the extended maintenance interval?

For example, an entity has records showing that they have maintained a voltage or current transformer within the prescribed maintenance interval listed in level 1 monitoring (which is a maximum 12 year maintenance interval). Could this same entity go to level 3 monitoring (which is a continuous maintenance interval) immediately if it can query their SCADA and produce detailed records indicating the accuracy of the PT or CT for the maintenance records already retained?

5. Within PRC-005 Attachment A, the draft standard establishes parameters for performance-based maintenance, where the historical performance of the devices is known and analyzed to support adjustment of the maximum intervals. Do you agree with this approach? If not, please explain in the comment area.

Yes

No

Comments:

(CG) I agree with this approach; however, I think most entities will not see the advantage of this type of maintenance until they can resolve any gaps in data retention.

If an entity was retaining a set of maintenance records but failed to include all the needed information as specified in this standard so they would need to adjust their

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maintenance procedure to collect all information and then they would need to wait for the entire retention period until they could use this performance-based maintenance.

If an entity had a collateral set of records which verified the information that lacked in the original maintenance record then, could the entity start using the performance-based maintenance?

6. The Standard Drafting Team has provided a “Supplementary Reference Document” to provide supporting discussion for the Requirements within the standard. Do you have any comments on the Supplementary Reference Document? Please explain in the comment area.

Yes

No

Comments:

7. The Standard Drafting Team has provided a “Frequently-asked Questions” document to address anticipated questions relative to the standard. Do you have any comments on the FAQ? Please explain in the comment area.

Yes

No

Comments:

8. If you are aware of any conflicts between the proposed standard and any regulatory function, rule, order, tariff, rate schedule, legislative requirement, or agreement please identify the conflict here.

Conflict: N/A

Comments: N/A

9. If you are aware of the need for a regional variance or business practice that we should consider with this project, please identify it here.

Regional Variance: N/A

Business Practice: N/A

Comments: N/A

10. If you have any other comments on this Standard that you have not already provided in response to the prior questions, please provide them here.

Comments:

A. (TH) In the applicability section 4.2.5.5. Protection systems for ~~system~~ **BES** connected station-service transformers for generators that are part of the BES.

B. (TH) For protection system communications equipment and channels, there is a lot of data to collect. Some entities don't collect data to this magnitude. How can an entity strapped for manpower reasonable collect data error rate, reflected power, and signal level measurement but still remain compliant with this standard?