

## **Unofficial Comment Form for the First Draft of System Protection Coordination Standard (Project 2007-06)**

Please **DO NOT** use this form. Please use the [electronic form](#) located at the link below to submit comments on the proposed first draft of the System Protection Coordination Standard PRC-001-2 (Project 2007-06). Comments must be submitted by **October 26, 2009**. If you have questions please contact Al Calafiore at [Al.Calafiore@nerc.net](mailto:Al.Calafiore@nerc.net) or by telephone at 678-524-1188.

[http://www.nerc.com/filez/standards/System\\_Protection\\_Project\\_2007-06.html](http://www.nerc.com/filez/standards/System_Protection_Project_2007-06.html)

### **Background Information:**

The System Protection Coordination Standard Drafting Team (SPC SDT) has revised the previous standard PRC-001-1 to address the planning and non-operational issues identified by the System Protection and Control Task Force for PRC-001 as well as those identified in FERC Order 693. It also brings the standard into conformance with the "Standard Review Guidelines."

The draft standard has refocused the requirements on the planning time frame and addressed important Protection System coordination issues that were not previously in the Standard. The draft standard has added requirements to ensure that Protection System designs and settings are communicated between and accepted by interconnecting entities which will assist Protection Systems to function in an integrated manner. Requirements that deal with operating issues are transferred to the appropriate drafting team(s) revising the operating standards. These previous requirements were R2, R5 and R6 which will be covered in TOP-001-2, TOP-003-1 and IRO-10-1 (currently covers part of R6). The old requirement R1 has been redeveloped into the new R6 and R7 which deal with providing Protection System information separately to the Transmission Operator and the Generator Operator. The training aspects of that requirement are properly addressed in the PER series of standards including PER-005-1.

The System Protection Coordination Standard Drafting Team would like to receive industry comments on this standard PRC-001-2.

**\*Please use the [comment form](#) to submit your final responses to NERC.**

1. The SDT determined that this standard is applicable to following registered entities: Transmission Owners, Generator Owners and Distribution Providers according to the NERC Glossary of Terms that clearly defines these entities in all NERC Regional Reliability Organizations. Do you agree with this? If not, please explain in the comment area.

Yes

No

Comments:

2. Due to the many meanings of coordination and our intention to clarify the purpose of the standard, the SDT has included a definition for the term "System Protection Coordination" as it applies to this standard. The intention was to target coordination of fault clearing protection systems. Do you agree that the definition is appropriate for this standard? If not, please explain in the comment area.

Yes

No

Comments: The MRO NSRS has a concern that by making this standard applicable to all Distribution Protection systems, regardless of their location or relationship to the BES. The definition should be limited to what is System Protection Coordination. Because approved Reliability Standards are part of an entity's compliance obligation the MRO NSRS does not feel that the reference to the TPL reliability standards is necessary.

Suggested definition:

System Protection Coordination: the design and setting of Protection Systems that impact the reliability of the BES so that they remove the minimum number of power system elements from service.

3. This draft standard has placed specific deadlines in the requirements for information exchange, review, agreement and implementation. Do you believe that the amount of time provided for each of these actions is acceptable? If not, please explain in the comment area which times should be changed and what would be more appropriate.

Yes

No

Comments: These time frames are unacceptable and perhaps unachievable under ideal circumstances. The deadlines listed for new or revised protection schemes are not practical. Large, interconnection projects typically require segmenting the work and close coordination of engineering. Drawings, for instance, may be needed for multiple segments, and to require a six month lead time to provide a drawing would be unrealistic.

The MRO NSRS believes the detailed procedures defined in Attachment#1 should be deleted because they are too prescriptive for a standard. A standard should say "what" instead of "how" as currently being reviewed by a NERC standards development initiative chaired by Gerry Cauley; he recently gave a presentation titled "Developing

Results-Based Standards” to the NERC Standards Committee (on 10/07/2009). If however, an Attachment #1 is retained the lead times as described should be reduced to three months and, more importantly, the list of information modified. Scheme type and types of relays/communication equipment should be known well in advance along with an established one-line diagram. Drawings (other than the one-line) may not be completed and should be removed from the list. Instrument transformer ratios may not be finalized until relay settings are done, which may be only one to two months in advance; therefore, this bullet item should be removed. Several of the additional information items may also be unavailable until closer to in-service, such as transformer tap positions and factory test results that would provide actual impedance values.

It would then follow that the times listed in Attachment 1 under steps 2, 3 and 4 should be modified. Leaving the times to an agreed upon schedule is a more practical solution.

Under R3 and Attachments 2 and 3, the lead times should be modified as described above for R2.

For R4, there should be a limited scope to comply in one month. An entity should not be required to provide everything, everywhere in 30 days or less.

R5 should be deleted. This is undue documentation that does not improve system reliability. The industry already coordinates on a regular basis. Protection engineers who already understand the description, purpose, and limitation of relaying already exchange information on a regular basis to ensure coordination.

Data exchange and requirements should be limited to registered entities only. An entity could be overwhelmed with requests from just anyone. Only those entities that are subject to the same standards and penalties should be allowed to request data. Otherwise there is the potential for disproportional burden where one entity is subject to non-compliance and the requestor is not.

4. Do you agree with the method of dispute resolution provided in Attachments 1, 2 and 3? If not, please explain in the comment area what would be more appropriate.

Yes

No

Comments: The attachments are part of the standard and the MRO NSRS is concerned that the second bullet in Article 3 of Attachments 1, 2, and 3 is a more detailed step than is necessary. A standard should say “what” instead of “how” as currently being reviewed by a NERC standard development initiative chaired by Gerry Cauley; he recently gave a presentation titled “Developing Results-Based Standards” to the NERC Standards Committee (on 10/07/2009). The MRO NSRS believes the second bullet in Article 3 of the attachments should say that there must be a dispute resolution process in place, and not go into the detail of listing all the various types.

5. The Associated Documents section C of PRC-001-2 includes only “PRC-001-2 System Protection Coordination Supplementary Reference — September 2009.” Are there other

documents that should be included as associated documents? If so, please list in the comment area each document name and explain why each should be included.

Yes

No

Comments:

6. The SDT has included VRFs with this posting. Do you agree with the assignments made? If not, please explain in the comment area.

Yes

No

Comments: Since much of this standard requires that documentation be transferred between parties, the MRO NSRS believes the VRF should be "Low" for the requirements that require sharing of documentation (Articles R4, R5, and R6).

7. The SDT has provided an Implementation Plan with this posting. Do you agree with the implementation time frames? If not, please explain in the comment area.

Yes

No

Comments: None

8. If you are aware of any regional variances that would be required as a result of this standard, please identify the regional variance.

Regional Variance: None

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

Conflict: None

10. If you have any other comments that you haven't provided in response to the above questions, please provide them here.

Comments:

A. This standard is way too prescriptive. This standard doesn't reflect the NERC initiative to minimize documentation requirements that do not improve system reliability. Protection engineers who already understand the description, purpose, and limitation of relaying already exchange information on a regular basis to ensure coordination. All of PRC-001 could be reduced to a single requirement.

Registered entities will exchange system protection data with other impacted neighboring registered entities upon request.

For compliance all that a utility would provide is a list of requests and a list of responses. Transmission entities already understand that to avoid problems they must coordinate their protection systems with one another.

B. CIP sensitive data should be handled properly. Many times data, such as relay settings, are considered CIP sensitive and could be CIP restricted. At a minimum, exemptions must be placed in the standard to deal with situations when an entity is not CIP compliant. A utility cannot be placed in a situation of choosing between violations.

C. The purpose of the standard should be restated slightly to say, "To ensure that System Protection Coordination is achieved with neighboring registered entities and ..."

Requirement 1 should not require entities to share their Protective System settings with any interconnected entity, even if the requesting entity requests information about a facility that is not part of their interconnection facilities.

MRO NSRS believes that entities should be required to only share information on those facilities that are needed for ensuring that the Protection System are coordinated. There needs to be a clause that states requests for Protection System that are not needed to ensure coordination are not covered by this requirement.

D. In attachments, all references to providing stability study results should be deleted. If the standard goes into effect as planned, 3 months after the end of 2010, then an auditor could require that all protection systems be completely modeled everywhere in an entities stability analysis package. There aren't enough relay or stability experts to handle the entire USA suddenly modeling everything - because someone could simply make a request for everything.

E. In R2 and R3 the MRO NSRS is concerned that the standard could be interpreted to require every Protection System device in any distribution or generation facility be included, regardless of whether or not it could impact the reliability of the BES. This could effectively require every Protection System an entity owns to meet transmission level requirements. In Articles 2.1, 2.2, 3.1, and 3.2 the following phrase should be added at the end of each sentence "that impacts the reliability of the BES".

F. The current language requires both the TO and DP to always complete the actions in attachment 2 / or 3 even if the other is not involved. The reality is that both may not always need to be involved and this requirement will require them to always be involved.

Requirements 3.3 and 3.4 should be modified to include a statement impact is to be determined by the responsible entity.

Suggested modification:

3.3 Making system configuration changes that are not on the interconnection and may impact, as determined by the TO or DP, System Protection Coordination.

3.4 Making Protection System changes that are not on the interconnection and may impact, as determined by the TO or DP, System Protection Coordination.

G. Further concerns with the Attachments 1, 2 and 3. The MRO NSRS is concerned that the procedures outlined in the attachments are overly complex and do not properly represent common practices within the industry. The SDT needs to develop requirements that can capture the overall purpose of the Attachment sections and bring that into the Requirement section of the standard.

H. Specific Questions about the Attachment sections:

1. What is a month? (The SDT seems to be assuming that this work will only take place on the 1<sup>st</sup> day of a month but why should some months be given less time than others?) Our recommendation is to change the month to a 30-day period.

2. When does step 2 start? (Does it start with the first submission of data to the TO or when the TO has acknowledge that the information is sufficient for it to begin the review to determine adequacy?)

I. In attachment 1, delete all data references that are not covered by MOD-012 such as generator saturated and unsaturated impedances and zero sequence impedances.