

New England States Committee on Electricity (NESCOE) Comments

December 5, 2012

Unofficial Comment Form

Project 2012-INT-02 – Interpretation of TPL-003-0a and
TPL-004-0 for SPCS

Please **DO NOT** use this form to submit comments. Please use the [electronic form](#) to submit comments on the Interpretation of TPL-003-0a (R1.3.1, R1.3.10, and R1.5) and TPL-004-0 (R1.3.1, R1.3.7, and R1.4), for System Protection and Control Subcommittee (Project 2012-INT-02). The electronic comment form must be completed by 8 p.m. ET **December 5, 2012**.

[Project page](#)

If you have questions please contact Scott Barfield-McGinnis at Scott.Barfield@nerc.net or by telephone at (404) 446-9689.

Background Information

This posting is soliciting formal comment through a 45-day formal comment period with an initial ballot in the last 10 days of the formal comment period.

Order 754 is the Final Rule approving the interpretation of TPL-002-0a for PacifiCorp (Project 2009-14) regarding requirement R1.3.10. In addition to the approval, the Commission expressed a concern about single points of failure of protection systems and issued a directive for further investigation. From the Order, "...the Commission believes that there is an issue concerning the study of the non-operation of non-redundant primary protection systems; e.g., the study of a single point of failure on protection systems" (P19). In the first part of the directive (P20), the Commission directed FERC staff to meet with NERC and its appropriate subject matter experts to explore this reliability concern, including where it can best be addressed, and identify any additional actions necessary to address the matter. This portion of the directive was satisfied by the October 24-25, 2011 Technical Conference. In the second part (P20), NERC must complete an informational filing within six months of the Order (March 15, 2012) explaining whether there is a further system protection issue that needs to be addressed and, if so, what forum and process should be used to address that issue and what priority it

should be accorded relative to other reliability initiatives planned by NERC. In its filing last March, NERC provided a status report on the approaches identified at the technical conference, including this interpretation.

This Request for Interpretation (RFI) was submitted by the System Protection and Control Subcommittee (SPCS) to NERC as one of the approaches identified at the technical conference to address the Federal Energy Regulatory Commission's concern about the study of single point of failure in protection systems documented in Order No. 754. The Standards Committee Executive Committee accepted the RFI of TPL-003-0a and TPL-004-0 for SPCS on February 3, 2012. A number of members from the Assess Transmission Future Needs Standards Drafting Team (ATFNSTD), Protection System Misoperations Standard Development Team (PSMSDT), and Protection System Maintenance and Testing Standard Drafting Team (PSMTSDT) formed the Interpretation Drafting Team (IDT) to respond to the RFI. The IDT has reviewed the SPCS request and developed this interpretation pursuant to the NERC Guidelines for Interpretation Drafting Teams, which is available [here](#).

Summary

The IDT was informed about the issues concerning Order No. 754 for background into the basis for the interpretation request. The SPCS requests clarification about the comprehensiveness of simulations required by the standards because it is not clear if the assessment must include the evaluation of shared or non-redundant protection system components. As discussed at the technical conference, there have been events where a single failed component has affected more than one protection system. For example, the Westwing Outage occurring June 14, 2004 in the Western Interconnection was one of three events identified in the March 30, 2009 NERC Industry Advisory (i.e., NERC Alert), Protection System Single Point of Failure.

First, the SPCS is requesting clarification concerning the parenthetical "(stuck breaker or protection system failure)" in Table 1, Category C and D as to whether an entity has the choice of evaluating either or if both must be evaluated. Second, the SPCS is requesting clarification regarding footnote 'e' as to the extent an entity must model a component failure.

The IDT is comprised of both transmission planning and protection system engineers to provide balanced input to the interpretation. The IDT discussed the application and performance required under the specified standards and requirements. In preliminary reviews, the IDT considered several approved NERC glossary terms such as: Protection System, Normal Clearing, and Delayed Fault Clearing. The IDT notes that the term Delayed Clearing as defined in Footnote 'e' of the referenced standards is similar, but not the same as the glossary term. The term Delayed Clearing in footnote 'e' coupled with the ambiguity of defined terms being used in the standard that were not capitalized presented difficulty in preparing a response to the SPCS request.

Furthermore, there can be areas of confusion when speaking about protection systems in general. This is especially true regarding the lower case use of “protection system” in the standards and its connection with the definition. The IDT did not apply the NERC glossary term definition as that definition was inconsistent with those components listed in the footnote ‘e’ description. Also, footnote ‘e’ and its use of “such as” adds confusion as to whether it means “for example” or “including, but not limited to.” In the case of the interpretation response, the IDT applied the meaning of “such as” to mean “for example” and the list of terms should not be construed to be an exhaustive or complete list.

You do not have to answer all questions. Enter All Comments in Simple Text Format.
Insert a “check” mark in the appropriate boxes by double-clicking the gray areas.

Please review the request for an interpretation, the associated standard, and the draft interpretation and then answer the following questions.

1. Do you agree with the revised **Response 1** of this interpretation? If not, what, specifically, do you disagree with? Please provide specific suggestions or proposals for any alternative language.

- Yes
 No

Comments:

2. Do you agree with **Response 2** of this interpretation? If not, what, specifically, do you disagree with? Please provide specific suggestions or proposals for any alternative language.

- Yes
 No

Comments: The New England States Committee on Electricity (NESCOE) appreciates this opportunity to comment on a narrow issue raised by ISO New England (ISO-NE) regarding the intended meaning of “protection system component failure” in Response 2. In comments on Draft One of the proposed interpretation, ISO-NE requested clarification on whether a battery system is considered a component of a protection system for purposes of the standard. ISO-NE stated that the answer to this question could have significant implications for the outcome of stability studies, citing as an example that substations may have full redundancy protection in all aspects except for the battery system. NESCOE understands that ISO-NE will provide comments on this Draft 2 version noting that modeling non-redundant DC supply or battery failure was not intended in the drafting of the interpretation and that the cost of requiring redundant battery protection systems in all cases will be clearly outweighed by any reliability benefit gained.

NESCOE shares ISO-NE’s concern that the latest version of Response 2 does not resolve the ambiguity related to modeling protection system failures and whether battery systems are distinguished from other components. Specifically, the language in paragraph one provides that the planning authority and transmission planner may exercise “engineering judgment” in selecting protection system component failures for study. However, the subsequent

paragraph appears to require study of the most severe event, which absent clarification could be read to mandate the modeling of battery failure.

New England consumers should not be exposed to cost increases due to a lack of clarity. Nor, as in all cases, should consumers bear costs that are not justified by measurable reliability benefits. NESCOE requests that the IDT squarely address and resolve this ambiguity in a subsequent version of the proposed interpretation. Thank you for your consideration of these comments.