Unofficial Comment Form

Project 2019-04 Modifications to PRC-005-6

**Do not** use this form for submitting comments. Use the [Standards Balloting and Commenting System (SBS)](https://sbs.nerc.net/) to submit comments on draft one of Reliability Standard **PRC-005-7 – Protection System, Automatic Reclosing, and Sudden Pressure Relaying Maintenance** by **8 p.m. Eastern, Monday, July 10, 2023.   
m. Eastern, Thursday, August 20, 2015**

Additional information is available on the [project page](https://www.nerc.com/pa/Stand/Pages/Project-2019-04-Modifications-to-PRC-005-6.aspx). If you have questions, contact Senior Standards Developer [Laura Anderson](mailto:laura.anderson@nerc.net), or at 404-446-9671.

## Background Information

In June of 2016, Xcel Energy submitted a Request for Interpretation (RFI) to NERC seeking clarification on what equipment should be included in the scope of an entity’s Protection System Maintenance Program relative to NERC Reliability Standard PRC-005-6. Xcel Energy noted that many modern generator excitation systems have the capability to respond to electrical quantities and initiate trip signals to either the generator lockout or generator output breaker. Xcel Energy asked whether a protection function (if enabled) that is embedded in a generator’s excitation system or voltage regulator would meet the definition of Protection System, and therefore be included in the scope of PRC-005-6. The RFI was rejected for the following reason:

*"The generator excitation systems and voltage regulators described in Xcel Energy’s RFI are capable of monitoring electrical quantities, such as voltage or current, and responding to those quantities, by causing a trip of the generator in response to these signals. Therefore, it is clear that these embedded protective functions, if enabled, would be included in the scope of Reliability Standard PRC-005-6 as set out in the Applicability section of the standard."*

The North American Generator Forum (NAGF) received feedback from members indicating that significant confusion still remains throughout the industry regarding the applicability of protective functions inside synchronous generator excitation systems to PRC-005. Consequently, in May 2019, the NAGF submitted a Standard Authorization Request (SAR) to NERC requesting revisions be made to PRC-005-6 that would provide clear and unambiguous language within the standard pertaining to the applicability of protective functions within Automatic Voltage Regulators (AVRs) and any maintenance requirements (activities and intervals) associated with those protective functions.

Summary of proposed revisions:

1. Clarification that Bulk Electric System (BES) protective functions enabled within analog/digital AVRs, excitation systems, and BES protective functions enabled within control systems that respond to measured electrical quantities and trip BES Elements either directly or indirectly or via lockout or auxiliary tripping relays.
2. Updated associated maintenance tables.
3. Included new dc supplies (e.g., lithium ion, flow) for Protection Systems.
4. Included entities registered as UFLS-only Distribution Providers (DPs) in the Applicability section, in Requirements R1, R2, R3, R4 and R5, and in Measures M1, M2, M3, M4, and M5. (A Technical Rationale document has been developed to accompany the revisions to the Applicability section, Requirements R1, R2, R3, R4 and R5, and in Measures M1, M2, M3, M4, and M5.)
5. Updated the Supplementary Reference and FAQ to align with all revisions made in the standard.
6. Modified the definition of Protection System. (A Technical Rationale document has been developed to accompany the revisions to Protection System.)

## Questions

1. The Standard Drafting Team (SDT) modified the definition of Protection System. The SDT determined that these modifications were necessary to provide clarity on the inclusion of components of control systems which measure and utilize similar quantities as protective relays and perform similar functions as protective relays. Do the revisions to the Protection System definition and proposed PRC-005-7 (along with the Technical Rationale document) provide clarity to which, if any, components of excitation systems and other control systems are applicable to PRC-005? If you do not agree, please provide your recommendation for clarifications, examples and, if appropriate, technical or procedural justification.

Yes

No

Comments:

1. Do the changes to PRC-005 Tables 1-4 adequately address alternative dc supply technologies? If you do not agree, please provide your recommendation for clarifications, examples and, if appropriate, technical or procedural justification.

Yes

No

Comments:

1. The Applicability section, Requirements R1-R5, and Measures M1-M5 were updated to include entities registered as UFLS-only DPs for consistency with changes made to NERC’s FERC-approved Risk-Based Registration (RBR). Do you agree with the revisions to include UFLS-only DPs? If you do not agree, please provide your recommendation and, if appropriate, technical or procedural justification.

Yes

No

Comments:

1. The SDT believes the language of PRC-005-7 addresses the issues outlined in the SAR in a cost effective manner. Do you agree? If you do not agree, please provide your recommendation and, if appropriate, technical or procedural justification.

Yes

No

Comments:

1. The implementation plan for PRC-005-6 provided compliance dates for Sudden Pressure Relaying, Automatic Reclosing, and dispersed generation resources Entities are currently subject to implementation requirements under the PRC-005-6 implementation plan, which incorporated the PRC-005-2(i) implementation plan by reference for Components first addressed in that standard. Those prior implementation requirements are carried forward in the PRC-005-7 Implementation Plan. Do you agree with the proposed implementation plan timeframes? If you think an alternate timeframe is needed, please propose an alternate implementation plan with detailed explanation.

Yes

No

Comments:

1. Please provide any additional comments on the standard, technical rationale, and Supplementary Reference and FAQ.

Comments: