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) to submit comments on the Project 2019-04 Modifications to PRC-005-6 Standard Authorization Request by 8 p.m. Eastern, Wednesday, August 28, 2019.

See the project page or contact Standards Developer, Mat Bunch (via email) or at (404) 446-9785 for more information or assistance.

Background Information
On May 14, 2019, NERC received a SAR from the North American Generator Forum (NAGF) seeking to revise Reliability Standard PRC-005-6 – Protection System, Automatic Reclosing, and Sudden Pressure Relaying Maintenance to clarify the applicability of PRC-005-6 to the protective functions within an Automatic Voltage Regulator (AVR) and provide the prescribed maintenance activities. The SAR also requests the PRC-005-6 Supplementary Reference and FAQ be updated to reflect the changes to the standard.

Purpose/Industry Need
The SAR proposes revisions to PRC-005-6 that provide clear, unambiguous guidance on the scope of applicability to AVR protective functions. Without clear applicability, the industry is struggling with how to implement PRC-005-6 and what testing is acceptable to meet the required maintenance activities prescribed by PRC-005-6. This topic is only applicable to a Generator Owner that owns a synchronous generating unit with an installed digital AVR. The SAR also proposes revising PRC-005-6 to add a new section under Facilities to clearly delineate the applicability of Protection Systems associated with AVR protective functions, limiting the scope of the AVR protective functions to those elements that open a breaker directly or via lockout or tripping auxiliary relays.

Questions
1. Do you agree with the project scope as outlined in the SAR? If you do not agree, or if you agree but have comments or suggestions, provide your recommendation or proposed modification below.

☐ Yes
☐ No

Comments:

We would suggest the following to SDT:
1. Clarify which protective functions in AVR are relevant protective functions that open a breaker directly or via lockout or tripping auxiliary relays, e.g. should diode failure, field...
over temperature or field overvoltage protections be included versus loss of field or generator overvoltage protection;
2. Confirm that external devices e.g. field ground relay, electromechanical field overvoltage are excluded from the scope;
3. Evaluate the possibility of modifying the Protection System definition (NERC Board of Trustees Approved Definition) by including relevant AVR protection functions in the definition, thus table 1-1 will be applicable to AVR with relevant protection functions.

In addition to the proposed project scope, even if no aforementioned (step 1) AVR protective functions are used, the SDT should consider if there will be a benefit to the reliable operation of the BES to verify that settings are as specified (no relevant protection functions are enables) and that measurement of power system input and output values are acceptable. Acceptable AC/DC voltage and current measurements are essential to proper AVR control and verification is not specifically covered in MOD-026-1. The settings changes are covered by R4 of MOD-026-1, as it is in R3 of PRC-001-1.1(ii) for protection relays. MOD-026-1 verification is performed every 10 years whereas PRC-005-6 tables 1-1 is 12 years, SDT should consider coordinating time interval with MOD-026-1 period if a new table is added specifically for the AVR.

2. If you have any other comments on this SAR that you haven’t already mentioned above, provide them here:

Comments: