NERC

Meeting Notes Project 2021-01 Modifications to MOD-025 and PRC-019 Drafting Team

March 10, 2022 | 12:00 - 3:00 p.m. Eastern

Conference Call with Web Access

Administrative

- 1. Reviewed NERC Antitrust Compliance Guidelines and Public Announcement
- 2. Determination of Quorum

The rule for NERC Standard Drafting Team (SDT) states that a quorum requires two-thirds of the voting members of the SDT to be physically present. Quorum was achieved.

- 3. Introductions and Chair's Remarks
- 4. Review Meeting Agenda and Objectives

Agenda Items

- 1. Administrative 2021-01 Extranet access
- 2. PRC-019 Revisions

The DT reviewed several items in the initial draft for PRC-019.

- a. Composite capability curve (CCC) would include the following:
 - i. Generator CCC consists of separate intersecting curves that may include the following:
 - (1) Rotor Current Heating: over-excited (lagging) reactive capability of the generator, established by the rated field current limit heating.
 - (2) Stator Current Heating: operating limits at rated stator current and the highest output power at unity power factor.
 - (3) Stator End Iron Heating: based on geometry of the conductors at the end turns, limit of operation in the under-excited (leading) region.
 - ii. Protection and limiter curves (OEL/UEL) determine feasibility of adding OEL to P-Q curve, and prime mover limitation (P-max).
 - iii. For inverter-based resources, a similar P-Q curve can be created by an analysis of the plantlevel controls and collector system information and shunt compensation that dictate a P-Q curve in steady state. <u>Action</u>: Alex and Jason to provide technical process document which could be an appendix in PRC-019.

3. Background of MOD-025 Paths

a. Discussed how the team outline seven paths and narrowed down to three options.



- Verification using composite capability curve (no staged testing). <u>Action</u>: Sub-team (Jason, Jonathan, Joey, Steve, and David) to define what needs to be included for this activity. Chris to send NATF document to team for review.
- ii. Verification using CCC and staged testing.
- iii. Generator Owner choses between CCC verification, staged testing, operational data.
- b. Discussion on purpose of staged testing (future):
 - i. Discussed if results of staged testing should or should not be used by TP in models.
 - ii. Demonstrate the generator can operate within the CCC to maximum extent possible based on grid conditions.
 - iii. Identify unknown limitations of generator or plant capability.
 - (1) Generator/Auxiliary bus limitations
 - (2) Thermal limits of generator
 - (3) OEL/UEL setting
- 4. Project Timeline
- 5. Future Meeting(s) Tuesday, April 5, 2022 | 12:00 - 3:00 p.m. Eastern
- 6. Adjourn