

Meeting Notes Project 2010-02 – Connecting New Facilities to the Grid

March 19, 2014 | 8 a.m.-5 p.m. Eastern

March 20, 2014 | 8 a.m.-3 p.m. Eastern

NERC Offices

1325 G Street NW, Suite 600

Washington, DC 20005

Administrative

1. Introductions

Standards Developer Mallory Huggins initiated the meeting and reviewed the NERC Antitrust Compliance Guidelines, Public Announcement, Participant Conduct Policy, and Email List Policy. She thanked all members for participating in the meeting and led group introductions, including an explanation of the various Standard Drafting Team (SDT) supporter roles (developers, legal staff, Project Management and Oversight Subcommittee representative, and FERC observers). The following members and observers were in attendance:

Name	Company	Member/ Observer	In-Person/ Phone
Mike Steckelberg (Chair)	Great River Energy	M	In-Person
Jeff Gindling (Vice Chair)	Duke Energy	M	In-Person
Jeff Baker	Duke Energy	O	Phone
David Busby	Southern Company	O	Phone
Zakia El Omari	Georgia Transmission Corporation	M	In-Person
Dennis Fuentes-Pedrosa	FERC	O	In-Person
Brett Furuness	MISO	O	Phone
Kenneth Goldsmith (PMOS Rep)	Alliant Energy	O	In-Person
John Hagen	Pacific Gas & Electric	M	In-Person
Joseph Hay	PJM	M	In-Person

Name	Company	Member/ Observer	In-Person/ Phone
Ruth Kloecker	ITC Holdings	M	In-Person
Per-Anders Lof	National Grid	O	Phone
David O'Connor	FERC	O	In-Person
Selene Sanchez	Southern California Edison	O	In-Person
Zelalem Tekle	Baltimore Gas and Electric, An Exelon Company	M	In-Person
Ganesh Velummylum	NIPSCO	M	Phone
Mallory Huggins	NERC	M	In-Person
Erika Chanzas	NERC	M	In-Person

2. Review Meeting Agenda and Objectives

- a. Mike Steckelberg gave an overview of meeting objectives, noting that the purpose of the meeting is to review the documents completed by the Five-Year Review Team (FYRT) and comments on the Standard Authorization Request (SAR). Mallory confirmed that there will be a Standards Committee Executive Committee (SCEC) meeting the week of March 31 to present FAC-001-2 and FAC-002-2 for posting. She also noted that the schedule targets an August 2014 Board of Trustees meeting.

Agenda Items

1. Standard Drafting Team Orientation

- a. Mallory provided an overview of the NERC standards development process and SDT roles and responsibilities, addressing questions as they were raised.

2. Comments and Input for Review

- a. *SAR Comments and Redline Changes to Standards:* Mike led the team through a high-level review of the SAR comments at a topic/theme level and then led the team through a detailed review of each comment, which included discussion of how to best modify the standards to incorporate the comments that the SDT agreed were technically sound. Generally, the SDT continued to use the strategy proposed by the Five-Year Review Team (FYRT), though it did make additional changes in conformance with some of the comments.

In addition to the changes detailed below, throughout both standards, the SDT also ensured that all Facilities in question were described as “new or materially modified.” The intended meaning of “materially modified” is explained in the Guidelines and Technical Basis section of

each standard. The SDT also changed all references to “Facility connection requirements” to “Facility interconnection requirements.”

b. *FAC-001-2*: The SDT proposed the following changes to FAC-001-2:

- i. Revised the title and purpose to reflect the language in the requirements.
- ii. Removed the reference in R1 to: “...compliance with NERC Reliability Standards and applicable Regional Entity, subregional, Power Pool, and individual Transmission Owner planning criteria and Facility connection requirements” because it is redundant with FAC-002, R1.2.
- iii. Moved all of the subparts in R3, except for what are now R3.1 and R3.2, and to the Guidelines and Technical Basis section. The SDT wants to provide entities with the flexibility to determine the Facility interconnection requirements that are technically appropriate for their respective Facilities. Including them as subparts of R3 was deemed too prescriptive, as frequently some items in the list will not apply to all applicable entities – and some applicable entities will have requirements that expand upon the list. The Guidelines should be used as a starting point for each Transmission Owner and applicable Generator Owner to consider in the development of Facility interconnection requirements.
- iv. Modified R3 to ensure that the impact on third parties “(affected system(s))” is appropriately addressed.
- v. Retired R4.
- vi. Updated all compliance elements: updated the Measures to add examples of acceptable evidence; modified the VSLs for conformance with the updated requirement language; modified the VRFs for conformance with NERC’s VRF guidelines; added Time Horizons to each requirement.

c. *FAC-002-2*: The SDT proposed the following changes to FAC-002-2:

- i. Revised the title and purpose to reflect the language in the requirements.
- ii. Rearranged the order of Functional Entities in the Applicability section to reflect the order in the Functional Model; changed “Planning Authority” in the applicability section to “Planning Coordinator” to reflect the Functional Model, as well as the recently revised TPL-001-4; added “Applicable Generator Owner” to the Applicability section so that R4 does not require a reference to FAC-001.
- iii. Separated R1 into four requirements to add clarity and better distinguish the actions required of the applicable entities.
- iv. Revised the subparts of R1 to remove elements that are more appropriate for Measures.

- v. Modified R1.1 to ensure that the impact on third parties (“affected system(s)”) is appropriately addressed.
 - vi. Modified R1.4 to remove the reference to the TPL Reliability Standards to avoid redundancy with the R1.2 reference to “all NERC Reliability Standards.”
 - vii. Updated all compliance elements: added Measures, VRFs, and Time Horizons to each requirement; modified the VSLs for conformance with the updated requirement language.
- d. *FERC Directives*: Mallory reviewed the directives and the FYRT’s consideration of them. She noted that she adjusted the document to indicate that these are the drafting team’s responses, but that this will need to be agreed upon and adjusted as needed.
- e. *Independent Expert Review Panel Recommendations*: Mike noted that these are very specific, and should be reviewed a requirement-level. Mallory noted that these recommendations were in line with the FYRT’s direction of removing specificity from the standards.
- f. *Paragraph 81 Suggestions*: Mike reviewed the P81 suggestions. Mallory noted that these are in line with the comments received on the SAR. She added that the SDT needs to provide responses to these individually/separately to uphold the task of implementing P81 criteria in projects moving forward.
- g. Toward the end of the meeting, Mallory noted that the SDT hadn’t changed anything that would affect the FYRT’s responses to the FERC directives, IERP, and Paragraph 81.
- h. *Integration of Variable Generation Task Force’s Recommendations*: The Integration of Variable Generation Task Force (IVGTF), a task force under the Planning Committee, was asked to make recommendations for how NERC interconnection procedures and standards should be enhanced to address voltage and frequency ride-through, reactive and real power control, and frequency/inertial response criteria in light of the evolving range of technical characteristics and physical capabilities of variable generation equipment. The *2012 Special Assessment: Interconnection Requirements for Variable Generation*¹ includes several recommendations related to FAC-001.

The recommendations suggested adding additional detail to FAC-001, largely to account for the integration of variable generation, and they are generally inconsistent with the less-prescriptive direction of the SDT. Facility interconnection requirements are inherently inconsistent, and the proposed FAC-001-2 acknowledges that, while offering guidance (in the Guidelines and Technical Basis section) on the elements that should be considered for inclusion in Facility interconnection requirements. A Facility interconnection requirement standard cannot be too prescriptive about what must be included in a requirement because each Facility is different,

¹ The *2012 Special Assessment: Interconnection Requirements for Variable Generation* is available here: http://www.nerc.com/files/2012_IVGTF_Task_1-3.pdf.

and each Facility is subject to different regional and Transmission Owner Planning criteria. The SDT did accept the IVGTF's suggestion to add "including specifications for minimum static and dynamic reactive power requirements" to better describe the Reactive Power requirements in the "Voltage, Reactive Power, and power factor control bullet."

3. Develop Redline Standards and Supporting Documents

- a. *FAC-001-2 and FAC-002-2*: Changes to the standards were made as the SDT reviewed the SAR comments. Once all SAR comments were addressed, Mallory led the SDT through a final review of the standards, focusing on the Purpose and Background sections and the overall coherence of the requirements. All additional changes made during this discussion are reflected above.
- b. *Implementation Plan*: Mallory noted that the changes have not really changed what the entities are required to do. The SDT discussed possible time frames for implementation and decided that one year would be appropriate. While the changes may not require substantive process changes, it may take up to one year for entities to revise their internal process handbooks or similar documentation.
- c. *Supporting Documents*: The Mapping Document, VRF/VSL Justifications, Consideration of Issues/Directives, Comment Form, and Finalized SAR were discussed as part of the next steps.

4. Next Steps

- a. Mallory noted that the team still needs to complete the following before posting: Measures, VSLs, Rationale Boxes/Background, Guidance Document for FAC-001, VRF/VSL Justification, Consideration of Comments Form, Questions for Upcoming Comment Form, and a response to the IVGTF report. Mallory and Erika Chanzas also determined that the Guideline and Technical Basis section of FAC-001-2 should also include the justification of why the sub requirements have been moved there.
- b. The SCEC will need the redlined standards and a final SAR by March 26. Mallory will send those completed docs to the team by COB March 21. Mike will handle developing a paragraph to explain why the sub-requirements do not need to be part of the standard requirements, and John Hagen will draft an implementation plan with an explanation for why one year is sufficient time for implementation of the standard. The team will review via conference call on March 25, which Mallory will schedule. Mallory will then complete the remaining docs in the meantime and send them for email review. The goal is to post all documents the week of March 31.

5. Adjourn

- a. The meeting was adjourned at 3:30 p.m. Eastern on March 20, 2014.