

Meeting Notes

Project 2016-EPR-02 Enhanced Periodic Review of VAR Standards

December 20, 2016, January 3 and 11, 2017

Conference Calls

Administrative

1. Introductions

The meeting was brought to order by the Chair, S. Solis at 1:00 p.m. Eastern on Tuesday, December 20, 2016. S. Solis provided the team with general comments. Those in attendance were:

Name	Company	Member/ Observer	12/20	1/3	1/11
Stephen Solis	Electric Reliability Council of Texas, Inc. (ERCOT)	Chair	Y	Y	Y
Dennis Sauriol	American Electric Power (AEP)	Vice Chair	Y	Y	Y
Alex Chua	Pacific Gas & Electric (PG&E)	Member	Y	Y	Y
Kevin Harrison	ITC Holdings	Member	Y	Y	Y
Bill Harm	PJM Interconnection, LLC	Member	Y	Y	Y
Tim Kucey	PSEG Fossil, LLC	Member	Y	Y	Y
Michael Scott	NextEra Energy, Inc.	Member	Y	Y	Y
Amy Casuscelli	Xcel Energy	PMOS Liaison	Y	Y	Y
Laura Anderson	North American Electric Reliability Corporation	NERC Staff	Y	-	-
Scott Barfield-McGinnis	North American Electric Reliability Corporation	NERC Staff	Y	Y	Y
Soo Jin Kim	North American Electric Reliability Corporation	NERC Staff	-	-	Y

Name	Company	Member/ Observer	12/20	1/3	1/11
Lauren Perotti	North American Electric Reliability Corporation	NERC Staff	Y	Y	Y
Juan Villar	Federal Energy Regulatory Commission (FERC)	Observer	Y	-	-
Juan Luz	Federal Energy Regulatory Commission (FERC)	Observer	Y	-	Y
Michael Cruz-Montes	CenterPoint Energy, LLC	Observer	-	-	Y
Alan Engelmann	ComEd	Observer	-	Y	-
Nick Griffin	ATC	Observer	Y	Y	Y
Si Truc Phan	Hydro-Québec TransÉnergie	Observer	-	-	Y
Anthony Washington	Southern Company	Observer	Y	Y	-
Guy Zito	Northeastern Power Coordinating Council (NPCC)	Observer	-	Y	-

2. Determination of Quorum

The rule for NERC Standard Drafting Team (SDT or team) states that a quorum requires two-thirds of the voting members of the SDT. Quorum was achieved each call as all seven members were present.

3. NERC Antitrust Compliance Guidelines and Public Announcement

NERC Antitrust Compliance Guidelines and public announcement were read by S. Barfield-McGinnis. The group was reminded at the beginning of each call that participants are under the guidelines.

4. Roster Updates

The team reviewed the roster and confirmed that it was accurate and up to date.

5. Roster Review Meeting Agenda and Objectives

S. Barfield-McGinnis reviewed the meeting agenda and there were no questions.

Notes

1. Review of VAR-001 Template

The team reviewed feedback from G. Zito, Standards Committee's Standing Review Team member. The most significant items were reviewed.

The SDT noted that VAR-001-4.1 may need to include "Reactive Power schedule" in Requirement R1. The language should also retain flexibility so that Requirement R1 can be the same or different points in the system as Requirement R5. Consider whether defining these two terms would improve clarity. G. Zito's notes stated that he was not sure there is a clarity issue here that needs to be addressed. The R1 schedule is a system schedule communicated "up" to the RC and adjacent TOPs while the R5 voltage and reactive schedules are communicated down to the GOPs. Flexibility exists in the TOP schedules allowing them to define at what points these schedules are important. The team retained the observation.

The team noted that VAR-001-4.1, Requirement R4 does not provide clarity on how the exemption criteria developed (e.g., blanket or specific). This applies to the Voltage schedule and/or Reactive Power schedule in VAR-001, Requirement R5. Requirement R4 should provide clarity on how the exemption criteria is developed. For example, whether it is a blanket exemption or specific to certain generating units. Additionally, and questioned, if a GOP is unable to meet its Voltage schedule, how would an exemption be applied where a small generator is trying to control voltage when another large generator is driving megavar flow? How would this work in the case where the TOP has determined that there will be no criteria for exemption under Requirement R4? G. Zito noted that the standard seems to imply that the exemption criteria applies throughout the TOP area. There is also a need to ensure that there is no preferential treatment of generators. Criteria can be developed to treat different classes of generation (i.e., wind or solar) differently or those in load pockets, but the existing language is broad enough that it already does this. The SDT retained the observation.

The SDT noted that when implementing a voltage schedule, the TOP needs to coordinate and be cognizant of the system response due to a change of any generator's voltage schedule. VAR-001-4.1, Requirement R5 should consider additional clarity (could be addressed in the Guidelines and Technical Basis section) around coordination of implementing the Voltage schedules so that they are not all implemented at the same point in time (e.g., seasonal, time of day based, Voltage schedules for multiple generators). G. Zito asked in his notes why wouldn't the TOP already be aware of system response to generator voltage schedules and not be coordinating the schedules appropriately. The way this written it implies a "gap" in coordination. The team did not agree it was a gap, but an observation that the TOP needs to be aware of and understand how schedules may affect an area.

The SDT noted that in Requirement R6 that the Generator Operator (GOP) should be notified by the TOP, in addition to the Generator Owner (GO), of generator step-up (GSU) transformer tap changes. The SDT should consider whether Requirement R6 meets the content requirement of

identifying the correct functional entities. After discussion, the SDT eliminated this observation as being unnecessary.

The SDT identified that usage of "necessary" in Requirement R6 is superfluous. The TOP is already required to provide technical justification for the tap change during the consultation. Inclusion of "necessary" introduces an additional, vague barrier for a GSU transformer tap change. Therefore, the VAR-001-4.1, Requirement R6 should have the term "necessary" removed as it is superfluous. After further consideration, the team removed the observation.

2. Review of VAR-002 Template

The team reviewed feedback from G. Zito, Standards Committee's Standing Review Team member. The most significant items were reviewed.

The following items were eliminated from the template Paragraph 81 section:

- The PRT evaluated VAR-002-4 Requirement R2, Part 2.2 "When instructed to modify voltage, the Generator Operator shall comply or provide an explanation of why the schedule cannot be met." and identified that this requirement may be redundant with TOP-001-3 – Transmission Operations (Effective 4/1/2017), Requirements R2 and R3 when receiving an Operating Instruction. The PRT recommends that this part be evaluated for removal by the standard drafting team (SDT). However, some team members argued that it may be warrant having in VAR-002 to give additional visibility to Generator Operator, but the PRT identified it as meeting the Paragraph 81 criteria.
- The PRT evaluated VAR-002-4, Requirement R3 notification requirements being addressed by TOP-003-3 – Operational Reliability Data (Effective 4/1/2017) requirements. Some team members argued that it may be warrant having in VAR-002 to give additional visibility to Generator Operator, but the PRT identified it as meeting the Paragraph 81 criteria.
- The PRT evaluated VAR-002-4, Requirement R4 and some team members felt that this requirement could be potentially met through exception reporting or alternative means that may be handled by other standards.

The PRT eliminated the following items from the template:

- The PRT identified that VAR-002-4, Requirement R4 is not self-contained. It refers to the Bulk Electric System (BES) definition.
- In VAR-002-4, Requirement R6 Violation Severity Level (VSL), the PRT identified that the last VSL clause in the Severe VSL column uses the phrasing "Generator Owner failed to perform the tap changes..." and recommends that it should be phrased "could not comply with changing the taps" to be consistent with the requirement.
- In VAR-002-4, Requirement R2, the PRT identified that DGRs comprised of wind assets should be exempted from the start-up/shutdown notification requirement since generation can be intermittent based on the availability and variability of the wind.

The SDT concurred that the use of automatic voltage regulator (AVR) should be reviewed concurrent with any definitions to capture the variety of voltage controllers utilized in the BES today. For example, Distributed Generation Resources (DGRs) are comprised of numerous generators. Each generator may have its own AVR in addition to a site “AVR” that coordinates the voltage level of each of the distributed generators to regulate voltage at a common point such as the high-side of the GSU transformer.

The team in VAR-002-4, Requirement R5, identified a potential gap for cases where the Transmission Owner owns the GSU transformer. The SDT should determine if Requirement R6 properly identifies the functional entities, and, if not, restructure the requirement to include Transmission Owner (TO) owned GSU transformers. G. Zito believed this should not be characterized as a gap. The team believed this was a low risk item. S. Barfield-McGinnis noted that during the development of PRC-025-1, that the SDT identified TOs that owned the GSU transformer – primarily for non-U.S. entities.

The SDT believed that Requirement R3 has a potential gap in that the Reliability Coordinator (RC) is not included in the notifications. It may be good to have guidance on how the RC receives notifications identified in Requirement R3 as it may alter a System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) value. There is a potential that this could be addressed in VAR-001-4 or alternative guidance (e.g., IRO-010-2 – Reliability Coordinator Data Specification and Collection as the method for acquiring necessary notifications).

3. Cost Effectiveness

The SDT concurred that both standards are cost effective. G. Zito highlighted to the team that NERC is moving from cost effectiveness to a “cost of risk reduction analysis” or CRRA. G. Zito noted he can discuss further at the meeting but for the purposes of this document the team’s opinion of the existing standard being cost effective is sufficient. However, if changes as a result of the EPR team’s work move forward into a Standards Authorization Request and SDT, it may require a more formal recognition of the risk being addressed by the change and cost associated with that risk.

4. Action Items

Team will review both templates over the holiday.

5. Future Meeting(s)

In-person meeting is scheduled for the week of January 23, 2017.

6. Adjourn

The meeting adjourned at 4:05 p.m. Eastern on Wednesday, January 11, 2017.