Project 2011-INT-02 - Interpretation of VAR-002 for Constellation

Unofficial Standard Comment Form

Please DO NOT use this form for submitting comments. Please use the electronic form to submit comments on the Standard. The electronic comment form must be completed by March 23, 2012. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609-651-9455.

Background Information

This posting is soliciting formal comment.

Requirement R1 of VAR-002-1.1b states the following:

R1. The Generator Operator shall operate each generator connected to the interconnected transmission system in the automatic voltage control mode (automatic voltage regulator in service and controlling voltage) unless the Generator Operator has notified the Transmission Operator.

NERC received a request to interpret this requirement. The requester stated:

“During startup and shutdown of a generator, it is industry practice to have a generator’s AVR in the manual mode. Due to the instabilities associated with the changes in the field during these times, it is more reliable to have an operator control the generator than the AVR. Further, an AVR’s response is slower and more unreliable when the field current is low, which is the case during start up and shut down. Both the BA and TOP realize that during start up and shut down the real and reactive power from that generator cannot be counted upon for system stability.

Some regions have taken the stance that during start up and shut down of a generator, it is reasonable to assume that the AVR is in manual and that it will be switched to automatic once stable. This would not require contacting the TOP to state that the AVR is in manual for this
time period. Other regions have taken the approach that all status changes of the AVR from automatic, regardless of industry practice and stability, needs to be communicated to the TOP.

Constellation is seeking clarification of Requirement R1 as to whether or not a communication must be conducted between a GOP and a TOP during start up or shut down of a generator, when the unit is not stable and is not counted upon for real or reactive power by the BA and TOP at that time.

Constellation has found two issues caused by the lack of clarity/incorrect interpretation of this standard:

1. There is not a consistent view across the regions with regard to this requirement. Such inconsistencies are contrary to the intent of NERC’s CMEP and can expose entities to inconsistent evaluations. A procedure may be compliant in one region and may not be in another.
2. Requiring a GOP to communicate that the AVR is in manual during start up/shutdown is an unnecessary distraction at a time when the unit is unstable. A generator operator already communicates to the TOP that the unit is being started up or shutting down. Adding another communication imposes a redundant task when the generator operator is focused on controlling the unit and ensuring the reliability of the BES.”

The Standards Committee approved the use of a “rapid revision” approach to clarify the requirement in question directly in lieu of a formal interpretation. The Interpretation Team is proposing the attached modification to the standard to address the requested clarification. The redline standard includes the FERC approved VRFs and VSLs for this standard, which are unchanged from the previously approved versions. Several generic changes made to bring the standard into conformance with the latest approved format include the following:

- Replace Effective Date language to reflect current guidance from NERC legal.
- Changed, “Compliance Monitoring Responsibility” to “Compliance Enforcement Authority”
- Added, “Compliance Monitoring and Enforcement Processes”
- Replaced out-of-date Levels of Non-compliance with approved Violation Severity Levels
- Transferred approved VRFs from NERC’s VRF Matrix – which includes VRFs that have already been approved by FERC.
**Drafting Team Consideration**

The drafting team has summarized this request as a clarification of a communications protocol as it relates to compliance and not to address any technical issues with respect to assumptions regarding the AVR status during start up and shut down mode. Some units are not operated in automatic voltage control mode until they reach minimum load while others operate in automatic voltage control mode prior to closing the breaker to the bulk power system. The drafting team believes it is up to the Generator Operator to formally notify the Transmission Operator of its procedures for placing the unit into automatic voltage control mode.

The team revised the requirement to include two bullets that define the exceptions to when a unit must be operated in automatic voltage control mode. The first bullet is contained in the current approved version of the standard and provides the exception of when the Generator Operator notifies the Transmission Operator that the AVR is off. The second bullet was added to address the interpretation request. It states that there is an exception for when the unit does not normally operate in automatic voltage control mode during start up and shut down. Two footnotes were included to address what is intended by the terms “start up” and “shut down”. The footnotes are:

- Start up is deemed to have ended when the unit is ramped up to its minimum load and the unit is preparing for continuous operation.
- Shut down is deemed to begin when the unit is ramped down to its minimum load and the unit is preparing to go offline.

The drafting team does not intend for these two terms to be included in the NERC Glossary of Terms but are intended to provide guidance for when the exception applies.

You do not have to answer all questions. Enter All Comments in Simple Text Format. Bullets, numbers, and special formatting will not be retained.

Insert a “check” mark in the appropriate boxes by double-clicking the gray areas.

**Questions**

1. Do you agree with the use of this “Rapid” approach to clarify the standard, rather than clarifying the standard through an Interpretation? If No, please explain your concerns.

   ☑ Yes
   ☐ No

   Comments:
2. Does the language in the SAR adequately represent the issue raised in the interpretation request? If No, please provide your suggestions to modify the SAR.
   ☑ Yes
   ☐ No
   Comments:

3. Does the proposed revision resolve the issue raised in the interpretation request? If No, please provide your suggestions to modify the standard.
   ☑ Yes
   ☐ No
   Comments:

4. If you have any other comments on the SAR or on the proposed Standard that you have not provided above, please provide them here.
   Comments: NERC has indicated that footnotes should not be used in a standard. Footnotes 1, 2, and 3 (not included as part of this proposed revision) should be removed. Footnotes 1 and 2 define start-up and shutdown. Neither term is defined in the NERC Glossary and the terms as used in this standard should be prefaced with “generator” to eliminate any confusion with the start-up or shutdown of a network or load. If generator start-up and generator shutdown are unique to this standard, then they can be defined in the wording of the requirement. If they are not unique to this standard, they must be included in the NERC Glossary. To support this “rapid revision”, the process for including the terms in the NERC Glossary should be made to accommodate a “rapid revision”. Footnote 3 is a technical explanation, and should not be included in this standard.