

Compliance Operations

Draft Reliability Standard Compliance Guidance for
VAR-001-4 and VAR-002-3
October 21, 2013

Introduction

The NERC Compliance department (Compliance) worked with the VAR standard drafting team (SDT) to review the proposed standards VAR-001-4 and VAR-002-3. The purpose of the review was to discuss the requirements of the proposed standard to obtain an understanding of its intended purpose and the evidence necessary to support compliance. The purpose of this document is to address specific questions posed by the VAR SDT in order to aid in the drafting of the requirements and provide a level of understanding regarding evidentiary support necessary to demonstrate compliance.

While all compliance evaluations require levels of auditor judgment, participating in these reviews allows Compliance to develop training and approaches to support a high level of consistency in audits conducted by the Regional Entities. The following questions and answers are intended to assist the SDT in further refining the standard and to serve as a resource in the development of training for auditors.

VAR-001 and VAR-002 Questions

Question 1

How will compliance determine if sufficient reactive resources were scheduled as part of VAR-001-4 Requirement R2?

Compliance Response to Question 1

For VAR-001-4 Requirement R2, an auditor would review the studies that a TOP used to schedule resources to see that the studies show whether new resources should be brought online, or if the resources online are sufficient to regulate voltage levels. An auditor may observe a TOP reviewing the study and scheduling live and may pull samples from various time periods to determine whether a TOP scheduled resources as required in the study.

Question 2

Is it clear that VAR-001-4 Requirement R4 allows for exemptions, for any duration, from: 1) voltage schedules, 2) being in automatic voltage control mode, or 3) any notification requirements?

Compliance Response to Question

It is clear that VAR-001 Requirement R4 allows for any combination of exemptions for generator operators from 1) voltage schedules, 2) being in automatic voltage control mode, or 3) any notification requirements, as long as the

exemption meets the criteria specified by the TOP. An auditor will not look for any pre-authorization from the TOP; rather an auditor will verify that the generator operator has met the criteria set forth by the TOP.

Question 3

Tolerance bands apply to a set voltage or Reactive Power number with a +/- percentage as the tolerance band. The voltage range or Reactive Power range is a high and low number that a Generator Operator is expected to operate within for reliability purposes. With regard to VAR-001-4 Requirement R5, is it clear that when a voltage range or Reactive Power range is provided as a schedule, a tolerance band is not expected to also be provided?

Compliance Response to Question 3

Yes, it is clear based on VAR-001-4 Requirement R5 that a voltage or Reactive power schedule can be either: 1) a target number with a tolerance band, OR 2) a voltage or Reactive Power range to operate within. An auditor would not expect to see a tolerance band provided with an operating range for voltage or Reactive Power.

Question 4

With regard to VAR-002-3, will generators receive a violation for instances where a system event is affecting system voltage, but the generators made the appropriate conversions and set the AVRs to meet the original schedule provided by the TOP?

Compliance Response to Question 4

No, the generator operators can only be responsible for maintaining the schedule provided by the TOP based on existing facility equipment. In the event that a generator operator does not have the equipment to have visibility of high-side system voltage, the GOP will not have the ability to adjust VARs to maintain system voltage. An auditor is not to determine that, where the GOP does not have the high side monitoring equipment and where the AVR is set appropriately based on existing facility equipment, the generator operator is non-compliant. However, if the TOP provides a new directive or schedule, the GOP is required to follow the new directive. This directive can include modifying an AVR setting or providing more voltage support, and the generator operator is expected to comply pursuant to VAR-002-3.

Question 5

Related to VAR-002-3, generators can monitor voltage on either the low side and high side of the GSU (depending on equipment limitation) and the "number" being monitored by the Generator will not always equate to the number provided by the TOP. Is it clear that VAR-002 Requirement R2, part 2.3 only wants a conversion of the schedule provided to the number monitored? Is it clear that there should not be a violation if the schedule does not match the number being monitored on the low side as long as there is a documented conversion?

Compliance Response to Question 5

The Generator should be able to provide documentation that identifies the “number” being monitored and the calculation demonstrating how the “number” equates to the schedule provided by the TOP. The measure for VAR-002-3 Requirement R2, part 2.3 is clear on what evidence should be able to demonstrate this during an audit.

Question 6

VAR-002-3, Requirement R4 was added because generators cannot report a capability change until they are aware of the change. The currently enforceable standard requires a notification as soon as the capability change occurs; however, many times the change occurred well before the generators were aware of the problem. Is it clear that VAR-002-3 Requirement R4 is only violated after the generator is made aware of the change?

Compliance Response to Question 6

It is clear that VAR-002-3, Requirement R4 will only be a violation if the change is not reported after 30 minutes of becoming aware of the reactive capability change. An auditor will ask an entity for evidence to demonstrate when it became aware of the change in reactive capability. This will not be purely subjective; there are technical instances where it will be clear that an entity would have been made aware of the change in reactive capability. For example, one instance is where a unit is ramping to an expected VAR output, and it cannot reach it; a reactive capability change has occurred.

Conclusion

Following final approval of the Reliability Standard, Compliance will develop the final Reliability Standards Auditor Worksheet (RSAW) and associated training.