

Violation Risk Factor and Violation Severity Level Assignments

Project 2009-01 – Disturbance and Sabotage Reporting

This document provides the drafting team’s justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in

EOP-004-2 — Event Reporting

Each primary requirement is assigned a VRF and a set of one or more VSLs. These elements support the determination of an initial value range for the Base Penalty Amount regarding violations of requirements in FERC-approved Reliability Standards, as defined in the ERO Sanction Guidelines.

Justification for Assignment of Violation Risk Factors in EOP-004-2

The Disturbance and Sabotage Reporting Standard Drafting Team applied the following NERC criteria when proposing VRFs for the requirements in EOP-004-2:

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature.

The SDT also considered consistency with the FERC Violation Risk Factor Guidelines for setting VRFs:¹

Guideline (1) — Consistency with the Conclusions of the Final Blackout Report

The Commission seeks to ensure that Violation Risk Factors assigned to Requirements of Reliability Standards in these identified areas appropriately reflect their historical critical impact on the reliability of the Bulk-Power System.

In the VSL Order, FERC listed critical areas (from the Final Blackout Report) where violations could severely affect the reliability of the Bulk-Power System:²

- Emergency operations
- Vegetation management
- Operator personnel training
- Protection systems and their coordination
- Operating tools and backup facilities
- Reactive power and voltage control
- System modeling and data exchange
- Communication protocol and facilities
- Requirements to determine equipment ratings
- Synchronized data recorders
- Clearer criteria for operationally critical facilities
- Appropriate use of transmission loading relief.

Guideline (2) — Consistency within a Reliability Standard

The Commission expects a rational connection between the sub-Requirement Violation Risk Factor assignments and the main Requirement Violation Risk Factor assignment.

¹ North American Electric Reliability Corp., 119 FERC ¶ 61,145, order on reh'g and compliance filing, 120 FERC ¶ 61,145 (2007) (“VRF Rehearing Order”).

² Id. at footnote 15.

Guideline (3) — Consistency among Reliability Standards

The Commission expects the assignment of Violation Risk Factors corresponding to Requirements that address similar reliability goals in different Reliability Standards would be treated comparably.

Guideline (4) — Consistency with NERC’s Definition of the Violation Risk Factor Level

Guideline (4) was developed to evaluate whether the assignment of a particular Violation Risk Factor level conforms to NERC’s definition of that risk level.

Guideline (5) — Treatment of Requirements that Co-mingle More Than One Obligation

Where a single Requirement co-mingles a higher risk reliability objective and a lesser risk reliability objective, the VRF assignment for such Requirements must not be watered down to reflect the lower risk level associated with the less important objective of the Reliability Standard.

The following discussion addresses how the SDT considered FERC’s VRF Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The SDT believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

VRF for EOP-004-2:

There are four requirements in EOP-004-2. Requirement R1 was assigned a “Lower” VRF while Requirements R2, R3 and R4 were assigned a “Medium” VRF.

VRF for EOP-004-2, Requirements R1:

- FERC’s Guideline 2 — Consistency within a Reliability Standard. The Requirement specifies which functional entities are required to have procedure(s) for recognition of events, gather information for completing an event report, and communicating with other entities. The VRFs are only applied at the Requirement level and each Requirement Part is treated equally.
- FERC’s Guideline 3 — Consistency among Reliability Standards. This requirement calls for an entity to have procedure(s) for recognition of events, gather information for completing an event report, and communicating with other entities. This requirement is administrative in nature and deals with the means to report events after the fact. Most event reporting requirements in Attachment 1 are

for 24 hours after an event has occurred. The current approved VRFs for EOP-004-1 are all lower with the exception of Requirement R2 which is a requirement to analyze events. This standard relates only to reporting events. The analysis portion is addressed through the NERC Rules of Procedure and the Events Analysis Program.

- FERC’s Guideline 4 — Consistency with NERC’s Definition of a VRF. Failure to have a procedure(s) is not likely to directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system if an entity cannot report an event and that event led to other preventable events on the BES had the report been made in a timely fashion. Development of the procedure(s) is a requirement that is administrative in nature and is in a planning time frame that, if violated, would not, under emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system.. Therefore this requirement was assigned a lower VRF.
- FERC’s Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. EOP-004-2, Requirement R1 contain only one objective which is to have procedure(s). The content of the procedure is specified in Parts 1.1-1.5. Since the requirement is to have a procedure(s), only one VRF was assigned.

VRF for EOP-004-2, Requirement R2:

- FERC’s Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC’s Guideline 3 — Consistency among Reliability Standards. EOP-004-2, Requirement R4 is a requirement for entities to report events using the procedure(s) for recognition of events per Requirement R1. The Standard Drafting Team views this as an aspect of implementing the Operating Plan for reporting events. The act of reporting in and of itself is not likely to “directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system.” However, violation of a medium risk requirement should also be “unlikely to lead to bulk electric system instability, separation, or cascading failures...” Such an instance could occur if personnel do not report events. Therefore, this requirement was assigned a Medium VRF.
- FERC’s Guideline 4 — Consistency with NERC’s Definition of a VRF. EOP-004-2, Requirement R5 mandates that report events per their procedure(s). Bulk power system instability, separation, or cascading failures are not likely to occur due to a failure to notify another entity of the event failure, but there is a slight chance that it could occur. Therefore, this requirement was assigned a Medium VRF.

- FERC’s Guideline 5 - Treatment of Requirements that Co-mingle More Than One Objective. EOP-004-2, Requirement R5 addresses a single objective and has a single VRF.

VRF for EOP-004-2, Requirement R3:

- FERC’s Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC’s Guideline 3 — Consistency among Reliability Standards. EOP-004-2, Requirement R4 is a requirement for entities to report events using the procedure(s) for recognition of events per Requirement R1. The act of reporting in and of itself is not likely to “directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system.” However, violation of a medium risk requirement should also be “unlikely to lead to bulk electric system instability, separation, or cascading failures...” Such an instance could occur if personnel do not report events. Therefore, this requirement was assigned a Medium VRF.
- FERC’s Guideline 4 — Consistency with NERC’s Definition of a VRF. EOP-004-2, Requirement R5 mandates that report events per their procedure(s). Bulk power system instability, separation, or cascading failures are not likely to occur due to a failure to notify another entity of the event failure, but there is a slight chance that it could occur. Therefore, this requirement was assigned a Medium VRF.
- FERC’s Guideline 5 - Treatment of Requirements that Co-mingle More Than One Objective. EOP-004-2, Requirement R5 addresses a single objective and has a single VRF.

VRF for EOP-004-2, Requirement R4:

- FERC’s Guideline 2 — Consistency within a Reliability Standard. The requirement has no sub-requirements; only one VRF was assigned so there is no conflict.
- FERC’s Guideline 3 — Consistency among Reliability Standards. EOP-004-2, Requirement R3 specifies a time frame in which to verify the communications protocols developed in the procedures pursuant to Requirement R1. Both requirements have a Medium VRF.
- FERC’s Guideline 4 — Consistency with NERC’s Definition of a VRF. Failure to verify a communications protocol could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system if an entity cannot report an event and that event led to other preventable events on the BES had the report been made in a timely fashion. Therefore this requirement was assigned a medium VRF.
- FERC’s Guideline 5 — Treatment of Requirements that Co-mingle More Than One Objective. EOP-004-2, Requirement R3 addresses a single objective and has a single VRF.

Justification for Assignment of Violation Severity Levels for EOP-004-2:

In developing the VSLs for the EOP-004-2 standard, the SDT anticipated the evidence that would be reviewed during an audit, and developed its VSLs based on the noncompliance an auditor may find during a typical audit. The SDT based its assignment of VSLs on the following NERC criteria:

Lower	Moderate	High	Severe
Missing a minor element (or a small percentage) of the required performance The performance or product measured has significant value as it almost meets the full intent of the requirement.	Missing at least one significant element (or a moderate percentage) of the required performance. The performance or product measured still has significant value in meeting the intent of the requirement.	Missing more than one significant element (or is missing a high percentage) of the required performance or is missing a single vital component. The performance or product has limited value in meeting the intent of the requirement.	Missing most or all of the significant elements (or a significant percentage) of the required performance. The performance measured does not meet the intent of the requirement or the product delivered cannot be used in meeting the intent of the requirement.

FERC’s VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in EOP-004-2 meet the FERC Guidelines for assessing VSLs:

Guideline 1: Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance

Compare the VSLs to any prior levels of non-compliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of non-compliance were used.

Guideline 2: Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties

A violation of a “binary” type requirement must be a “Severe” VSL.

Do not use ambiguous terms such as “minor” and “significant” to describe noncompliant performance.

Guideline 3: Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement

VSLs should not expand on what is required in the requirement.

Guideline 4: Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations

. . . unless otherwise stated in the requirement, each instance of non-compliance with a requirement is a separate violation. Section 4 of the Sanction Guidelines states that assessing penalties on a per violation per day basis is the “default” for penalty calculations.

VSLs for EOP-004-2 Requirements R1:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R1	Meets NERC's VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The proposed requirement is a revision of CIP-001-1, R1-R4, and EOP-004-1, R2. Since the Requirement has four Parts, the VSLs were developed to count a violation of each Part equally. Therefore, four VSLs were developed.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for EOP-004-2 Requirement R2:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R2.	Meets NERC's VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The proposed requirement is for entities to implement the Operating Plan for event reporting. There are four Parts that are addressed under this requirement. Parts 1.1 and 1.2 are only applicable for an actual event and are binary in nature. Parts 1.4 and 1.5 require updates or reviews based on certain intervals. Based on the VSL Guidance, the DSR SDT developed four VSLs based on tardiness of the submittal of the report. If the update or review is not performed, then the VSL is Severe.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for EOP-004-2 Requirement R3:

R#	Compliance with NERC's VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R2.	Meets NERC's VSL guidelines. There is an incremental aspect to the violation and the VSLs follow the guidelines for incremental violations.	The proposed requirement is a revision of EOP-004-1, R3. There is only a Severe VSL for that requirement. However, the reporting of events is based on timing intervals listed in attachment 1. Based on the VSL Guidance, the DSR SDT developed four VSLs based on tardiness of the submittal of the report. If a report is not submitted, then the VSL is Severe. This maintains the current VSL.	The proposed VSL does not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSL uses the same terminology as used in the associated requirement, and is, therefore, consistent with the requirement.	The VSL is based on a single violation and not cumulative violations.

VSLs for EOP-004-2 Requirement R4:

R#	Compliance with NERC's Revised VSL Guidelines	Guideline 1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	Guideline 2 Violation Severity Level Assignments Should Ensure Uniformity and Consistency in the Determination of Penalties Guideline 2a: The Single Violation Severity Level Assignment Category for "Binary" Requirements Is Not Consistent Guideline 2b: Violation Severity Level Assignments that Contain Ambiguous Language	Guideline 3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	Guideline 4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations
R3.	Meets NERC's VSL guidelines - Severe: The performance or product measured does not substantively meet the intent of the requirement.	The most comparable VSLs for a similar requirement is EOP-008-0, R1.7 which calls for an annual update to a plan. Based on the VSL Guidance, the DSR SDT developed four VSLs based on tardiness of the verification of the communication protocol. If the verification is not achieved, then the VSL is Severe.	The proposed VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.	The proposed VSLs use the same terminology as used in the associated requirement, and are, therefore, consistent with the requirement.	The VSLs are based on a single violation and not cumulative violations.