NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Violation Risk Factor and Violation Severity Level Assignments

Project 2010-14.2.1 Balancing Authority Reliability-based Controls

This document provides the drafting team's justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in BAL-005-1, Balancing Authority Control. 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

The Frequency Response Standard drafting team applied the following NERC criteria when proposing VRFs for the requirements under this project:

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.

Guideline (3) — Consistency among Reliability Standards

[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.

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 requirement 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 BAL-005-1:
There are seven requirements in BAL-005-1. All of the requirements were assigned a "Medium" VRF.

VRF for BAL-005-1, Requirement R1:

- FERC Guideline 2 — Consistency within a reliability standard exists. The requirement does not contain sub-requirements. All of the requirements in BAL-005-1 are assigned a "Medium" VRF. Requirement R1 is similar in scope to Requirement R3 and Requirement R5. This is also consistent with the current FERC approved VRF for BAL-005-0.2b Requirement R8.
- FERC Guideline 3 — Consistency among reliability standards exists. This requirement is identical to the current enforceable BAL-005-0.2b Standard Requirement R8 which has an approved Medium VRF.
- FERC Guideline 4 — Consistency with NERC's Definition of the VRF level selected exists. This requirement, 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, but violation, in itself, would unlikely result in the Bulk Electric System instability, separation, or cascading failures since this requirement is an after-the-fact calculation, not performed in Real-time.

- FERC Guideline 5 — This requirement does not co-mingle reliability objectives.

VRF for BAL-005-1, Requirement R2:

- FERC Guideline 2 — Consistency within a reliability standard exists. The requirement does not contain sub-requirements. All of the requirements in BAL-005-1 are assigned a "Medium" VRF. This is also consistent with the current FERC approved VRF for BAL-005-0.2b Requirement R6.
- FERC Guideline 3 — Consistency among Reliability Standards exists. This requirement is identical to the current enforceable BAL-005-0.2b standard Requirement R6 which has an approved Medium VRF.
- FERC Guideline 4 — Consistency with NERC's Definition of the VRF level selected exists. This requirement, 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, but violation, in itself, would unlikely result in the Bulk Electric System instability, separation, or cascading failures since this requirement is an after-the-fact calculation, not performed in Real-time.
- FERC Guideline 5 — This requirement does not co-mingle reliability objectives.

VRF for BAL-005-1, Requirement R3:

- FERC Guideline 2 — Consistency within a reliability standard exists. All of the requirements in BAL-005-1 are assigned a "Medium" VRF. This is also consistent with the current FERC approved VRF in BAL-005-0.2b Requirement R8.1.
- FERC Guideline 3 — Consistency among Reliability Standards exists. This requirement is similar in concept to the current enforceable BAL-005-0.2b standard Requirement R8.1 which has an approved Medium VRF.
- FERC Guideline 4 — Consistency with NERC's Definition of the VRF level selected exists. This requirement, 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, but violation, in itself, would unlikely result in the Bulk Electric System instability, separation, or cascading failures since this requirement is an after-the-fact calculation, not performed in Real-time.
- FERC Guideline 5 — This requirement does not co-mingle reliability objectives.

VRF for BAL-005-1, Requirement R4:

- FERC Guideline 2 — Consistency within a reliability standard exists. This requirement does not contain sub-requirements. All of the requirements in BAL-005-1 are assigned a "Medium" VRF.
- FERC Guideline 3 — Consistency among Reliability Standards exists. This requirement is similar in concept to the current enforceable BAL-005-0.2b standard Requirement R8.1 which has an approved Medium VRF.
- FERC Guideline 4 — Consistency with NERC's Definition of the VRF level selected exists. This requirement, 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, but violation, in itself, would unlikely result in the Bulk Electric System instability, separation, or cascading failures since this requirement is an after-the-fact calculation, not performed in Real-time.
- FERC Guideline 5 — This requirement does not co-mingle reliability objectives.

VRF for BAL-005-1, Requirement R5:

- FERC Guideline 2 — Consistency within a reliability standard exists. This requirement does not contain sub-requirements. All of the requirements in BAL-005-1 are assigned a "Medium" VRF.
- FERC Guideline 3 — Consistency among Reliability Standards exists. This requirement is similar in concept to BAL-005-0.2b standard Requirement R3 which has a Medium VRF.
- FERC Guideline 4 — Consistency with NERC's Definition of the VRF level selected exists. This requirement, 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, but violation, in itself, would unlikely result in the Bulk Electric System instability, separation, or cascading failures since this requirement is an after-the-fact calculation, not performed in Real-time.
- FERC Guideline 5 — This requirement does not co-mingle reliability objectives.

VRF for BAL-005-1, Requirement R6:

- FERC Guideline 2 — Consistency within a reliability standard exists. This requirement does not contain sub-requirements. All of the requirements in BAL-005-1 are assigned a "Medium" VRF.
- FERC Guideline 3 — Consistency among Reliability Standards exists. This requirement is similar in concept to BAL-005-0.2b standard Requirement R7 which has a Medium VRF.

- FERC Guideline 4 — Consistency with NERC's Definition of the VRF level selected exists. This requirement, 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, but violation, in itself, would unlikely result in the Bulk Electric System instability, separation, or cascading failures since this requirement is an after-the-fact calculation, not performed in Real-time.
- FERC Guideline 5 — This requirement does not co-mingle reliability objectives.

VRF for BAL-005-1, Requirement R7:

- FERC Guideline 2 — Consistency within a reliability standard exists. All of the requirements in BAL-005-1 are assigned a "Medium" VRF. This is also consistent with the current FERC approved VRF in BAL-005-0.2b Requirement R12 which has an approved Medium VRF and BAL-006-2 Requirement R3 which has a Lower VRF. However, the SDT felt that this requirement was not purely an administrative requirement and therefore deserved a higher VRF.
- FERC Guideline 3 — Consistency among Reliability Standards exists. This requirement is similar in concept to the current enforceable BAL-005-0.2b Requirement R12 which has an approved Medium VRF and BAL-006-2 Requirement R3 which has an approved Lower VRF. However, the SDT felt that this requirement was not purely an administrative requirement and therefore deserved a higher VRF.
- FERC Guideline 4 — Consistency with NERC's Definition of the VRF level selected exists. This requirement, 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, but violation, in itself, would unlikely result in the Bulk Electric System instability, separation, or cascading failures since this requirement is an after-the-fact calculation, not performed in Real-time.
- FERC Guideline 5 — This requirement does not co-mingle reliability objectives.

Justification for Assignment of Violation Severity Levels:
In developing the VSLs for the standards under this project, 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 BAL-005-1 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 noncompliance and avoid significant changes that may encourage a lower level of compliance than was required when levels of noncompliance 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 noncompliance 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 BAL-005-1 Requirement R1:

R#	Compliance with NERC 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	The NERC VSL Guidelines are satisfied. The requirement is binary and the performance measured does not meet the intent of the requirement.	As drafted, the proposed VSLs do not lower the current level of compliance.	Proposed VSL is binary and therefore only has a severe VSL. The proposed VSL language does not include ambiguous terms. The VSL is similar to the current approved VSL for BAL-005-0.2b Requirement R8.	Proposed VSLs do not expand on what is required in the requirement. Proposed VSLs are consistent with the requirement.	Proposed VSLs are based on a single violation and not a cumulative violation methodology.

VSLs for BAL-005-1 Requirement R2:

R#	Compliance with NERC 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.	The NERC VSL Guidelines are satisfied by incorporating levels of noncompliance performance.	The proposed VSLs do not lower the current level of compliance.	Proposed VSLs are not binary. Proposed VSL language does not include ambiguous terms and ensures uniformity and consistency in the determination of penalties.	Proposed VSLs do not expand on what is required in the requirement. The VSLs assigned only consider the amount of time an entity is non-compliant with the requirement. Proposed VSLs are consistent with the requirement.	Proposed VSLs are based on single violations and not a cumulative violation methodology.

VSLs for BAL-005-1 Requirement R3:

R#	Compliance with NERC 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.	The NERC VSL Guidelines are satisfied by incorporating levels of noncompliance performance.	As drafted, the proposed VSLs do not lower the current level of compliance.	Proposed VSLs are not binary. Proposed VSL language does not include ambiguous terms and ensures uniformity and consistency in the determination of penalties based only on the amount of time an entity is non-compliant with the requirement.	Proposed VSLs do not expand on what is required in the requirement. Proposed VSLs are consistent with the requirement.	Proposed VSLs are based on single violations and not a cumulative violation methodology.

VSLs for BAL-005-1 Requirement R4:

R#	Compliance with NERC 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
R4.	The NERC VSL Guidelines are satisfied. The requirement is binary and the performance measured does not meet the intent of the requirement.	As drafted, the proposed VSLs do not lower the current level of compliance.	Proposed VSL is binary and therefore only has a severe VSL. Proposed VSL language does not include ambiguous terms and ensures uniformity and consistency in the determination of penalties based only on whether the information was provided.	Proposed VSLs do not expand on what is required in the requirement. Proposed VSLs are consistent with the requirement.	Proposed VSLs are based on single violations and not a cumulative violation methodology.

VSLs for BAL-005-1 Requirement R5:

R#	Compliance with NERC 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
R5.	The NERC VSL Guidelines are satisfied by incorporating levels of noncompliance performance.	As drafted, the proposed VSLs do not lower the current level of compliance.	Proposed VSLs are not binary. Proposed VSL language does not include ambiguous terms and ensures uniformity and consistency in the determination of penalties based only on the amount of time an entity is non-compliant with the requirement.	Proposed VSLs do not expand on what is required in the requirement. Proposed VSLs are consistent with the requirement.	Proposed VSLs are based on single violations and not a cumulative violation methodology.

VSLs for BAL-005-1 Requirement R6:

R#	Compliance with NERC 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
R6.	The NERC VSL Guidelines are satisfied. The requirement is binary and the performance measured does not meet the intent of the requirement.	This requirement is new. As drafted, the proposed VSL does not lower the current level of compliance.	Proposed VSL is binary and therefore only has a severe VSL. Proposed VSL language does not include ambiguous terms and ensures uniformity and consistency in the determination of penalties based only on whether the entity implemented an Operating Process to identify and mitigate errors.	Proposed VSLs do not expand on what is required in the requirement. Proposed VSLs are consistent with the requirement.	Proposed VSLs are based on single violations and not a cumulative violation methodology.

VSLs for BAL-005-1 Requirement R7:

R#	Compliance with NERC 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
R7.	The NERC VSL Guidelines are satisfied. The requirement is binary and the performance measured does not meet the intent of the requirement.	As drafted, the proposed VSL does not lower the current level of compliance.	Proposed VSL is binary and therefore only has a severe VSL. Proposed VSL language does not include ambiguous terms and ensures uniformity and consistency in the determination of penalties.	Proposed VSLs do not expand on what is required in the requirement. Proposed VSLs are consistent with the requirement.	Proposed VSLs are based on single violations and not a cumulative violation methodology.