

# Violation Risk Factor and Violation Severity Level Justifications

Project 2018-04 Modifications to PRC-024-2 September 2019

This document provides the standard drafting team's (SDT's) justification for assignment of violation risk factors (VRFs) and violation severity levels (VSLs) for each requirement in Reliability Standard PRC-024-3. Each requirement is assigned a VRF and a VSL. 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 Electric Reliability Organizations (ERO) Sanction Guidelines. The SDT applied the following NERC criteria and FERC Guidelines when developing the VRFs and VSLs for the requirements.

## NERC Criteria for Violation Risk Factors

### 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.

## FERC Guidelines for Violation Risk Factors

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

FERC seeks to ensure that VRFs 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:

- 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**

FERC expects a rational connection between the sub-Requirement VRF assignments and the main Requirement VRF assignment.

**Guideline (3) – Consistency among Reliability Standards**

FERC expects the assignment of VRFs 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 VRF 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.

## NERC Criteria for Violation Severity Levels

VSLs define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs.

VSLs should be based on NERC’s overarching criteria shown in the table below:

| Lower VSL  | Moderate VSL   | High VSL   | Severe VSL   |
|--|--|--|--|
| The performance or product measured almost meets the full intent of the requirement. | The performance or product measured meets the majority of the intent of the requirement. | The performance or product measured does not meet the majority of the intent of the requirement, but does meet some of the intent. | The performance or product measured does not substantively meet the intent of the requirement. |

## FERC Order of Violation Severity Levels

The FERC VSL guidelines are presented below, followed by an analysis of whether the VSLs proposed for each requirement in the standard 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.

## **Justification for PRC-024-3 VRFs and VSLs**

### **VRF Justification for PRC-024-3, Requirement R1**

The VRF did not change from the previously FERC-approved PRC-024-2 Reliability Standard.

### **VSL Justification for PRC-024-3, Requirement R1**

The SDT only made changes to conform the Requirement R1 VSL to the revised Requirement R1 language. The SDT retained the binary structure of the VSL, which is consistent with both the PRC-024-2 and PRC-024-1 VSLs. As a result, the [justification](#) for the Commission-approved PRC-024-1 Requirement R1 VSL supports the justification for the proposed PRC-024-3, Requirement R1 VSL.

### **VRF Justification for PRC-024-3, Requirement R2**

The VRF did not change from the previously FERC-approved PRC-024-2 Reliability Standard.

### **VSL Justification for PRC-024-3, Requirement R2**

The SDT only made changes to conform the Requirement R2 VSL to the revised Requirement R2 language. The SDT retained the binary structure of the VSL, which is consistent with both the PRC-024-2 and PRC-024-1 VSLs. As a result, the [justification](#) for the Commission-approved PRC-024-1 Requirement R2 VSL supports the justification for the proposed PRC-024-3, Requirement R2 VSL.

### **VRF Justification for PRC-024-3, Requirement R3**

The VRF did not change from the previously FERC-approved PRC-024-2 Reliability Standard.

### **VSL Justification for PRC-024-3, Requirement R3**

The SDT only revised the Requirement R4 VSL to remove the word “generator” to encompass all protection as defined in Section 4.2, Facilities. The SDT retained the existing levels of the VSLs, which is consistent with both the PRC-024-2 and PRC-024-1 VSLs. As a result, the [justification](#) for the Commission-approved PRC-024-1 Requirement R3 VSL supports the justification for the proposed PRC-024-3, Requirement R3 VSL.

### **VRF Justification for PRC-024-3, Requirement R4**

The VRF did not change from the previously FERC-approved PRC-024-2 Reliability Standard.

### **VSL Justification for PRC-024-3, Requirement R4**

The SDT only revised the Requirement R4 VSL to remove the word “generator” to encompass all protection as defined in Section 4.2, Facilities. The SDT retained the existing levels of the VSLs, which is consistent with both the PRC-024-2 and PRC-024-1 VSLs. As a result, the

[justification](#) for the Commission-approved PRC-024-1 Requirement R4 VSL supports the justification for the proposed PRC-024-3, Requirement R4 VSL.

**VRF Justification for PRC-024-3, Requirement D.A.2.**

The SDT made changes to conform the Requirement D.A.2. VSL to the revised Requirement 2 language with the addition of different no trip voltage boundaries based on power plant type as designated by the Planning Coordinator.

**VSL Justification for PRC-024-3, Requirement D.A.2.**

The SDT only made changes to conform Requirement D.A.2. with the Requirement R2 VSL as well as to add that newly designated strategic power plants have no less than 48 months to set their protection in accordance with the strategic power plant voltage boundaries in Attachment 2a. The SDT retained the binary structure of the VSL, which is consistent with both the PRC-024-2 and PRC-024-1 VSLs. As a result, the [justification](#) for the Commission-approved PRC-024-1 Requirement R2 VSL supports the justification for the proposed PRC-024-3, Requirement D.A.2. VSL.

**VRF Justification for PRC-024-3, Requirement D.A.5.**

The VRF for Requirement D.A.5. is Medium, given that is unlikely to lead to Bulk Electric System instability, separation, or cascading failures if violated. This is consistent with Requirements R1, R2, and D.A.2.

**VSL Justification for PRC-024-3, Requirement D.A.5.**

Proposed VSL's incorporate the increments for tardiness methodology. Proposed VSL language does not include ambiguous terms and ensure uniformity and consistency in the determination of penalties based on timeliness of the action specified. Proposed VSL's are based on a single violation and not a cumulative violation methodology.