NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Violation Risk Factor and Violation Severity Level Justifications

Project 2021-07 Extreme Cold Weather Grid Operations, Preparedness, and Coordination

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 Project 2021-07 Extreme Cold Weather Grid Operations, Preparedness, and Coordination. 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.

EOP-011-4

VRF Justification for EOP-011-4, Requirement R1

The VRF did not change from the previous EOP-011-3 Reliability Standard.

VSL Justification for EOP-011-4, Requirement R1

The VSL did not change from the previous EOP-011-3 Reliability Standard.

VRF Justification for EOP-011-4, Requirement R2

The VRF did not change from the previous EOP-011-3 Reliability Standard.

VSL Justification for EOP-011-4, Requirement R2

The VSL did not change from the previous EOP-011-3 Reliability Standard.

VRF Justification for EOP-011-4, Requirement R3

The VRF did not change from the previous EOP-011-3 Reliability Standard.

VSL Justification for EOP-011-4, Requirement R3

The VSL did not change from the previous EOP-011-3 Reliability Standard.

VRF Justification for EOP-011-4, Requirement R4

The VRF did not change from the previous EOP-011-3 Reliability Standard.

VSL Justification for EOP-011-4, Requirement R4

The VSL did not change from the previous EOP-011-3 Reliability Standard.

VRF Justification for EOP-011-4, Requirement R5

The VRF did not change from the previous EOP-011-3 Reliability Standard.

VSL Justification for EOP-011-4, Requirement R5

The VSL did not change from the previous EOP-011-3 Reliability Standard.

VRF Justification for EOP-011-4, Requirement R6
The VRF did not change from the previous EOP-011-3 Reliability Standard.

VSL Justification for EOP-011-4, Requirement R6
The VSL did not change from the previous EOP-011-3 Reliability Standard.

VRF Justifications for EOP-011-4, Requirement R7	
Proposed VRF	**Lower**
NERC VRF Discussion	A VRF of Lower is appropriate due to the fact that identifying and notifying entities that are required to assist with the mitigation of operating Emergencies through operator-controlled manual Load shedding or automatic Load shedding 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. Therefore, it is in line with the definition of a Lower VRF.
FERC VRF G1 Discussion Guideline 1- Consistency with Blackout Report	This VRF is in line with the identified areas from the FERC list of critical areas in the Final Blackout Report.
FERC VRF G2 Discussion Guideline 2- Consistency within a Reliability Standard	The assignment of Lower VRF is consistent with the VRF assignments for other requirements in the proposed Reliability Standard. This requirement has only a main VRF and no different sub-requirement VRFs.
FERC VRF G3 Discussion Guideline 3- Consistency among Reliability Standards	This VRF is in line with other VRFs that address similar reliability goals in different Reliability Standards.
FERC VRF G4 Discussion Guideline 4- Consistency with NERC Definitions of VRFs	This VRF is in line with the definition of a Lower VRF requirement per the criteria filed with FERC as part of the ERO's Sanctions Guidelines.
FERC VRF G5 Discussion	This requirement does not mingle a higher risk reliability objective and a lesser risk reliability objective.

VRF Justifications for EOP-011-4, Requirement R7	
Proposed VRF	**Lower**
Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation	Therefore, the VRF reflects the risk of the whole requirement.

VSLs for EOP-011-4, Requirement R7			
Lower	**Moderate**	**High**	**Severe**
N/A	The Transmission Operator identified on an annual basis the Distribution Providers, UFLS-Only Distribution Providers and Transmission Owners that are required to assist with the mitigation of operating Emergencies in its Transmission Operator Area through Operator-controlled manual Load shedding, undervoltage Load shedding, or underfrequency Load shedding, but notified one or more of those entities more than one, but fewer than 30 days late.	The Transmission Operator identified on an annual basis the Distribution Providers, UFLS-Only Distribution Providers and Transmission Owners, that are required to assist with the mitigation of operating Emergencies in its Transmission Operator Area through Operator-controlled manual Load shedding, undervoltage Load shedding, or underfrequency Load shedding, but notified one or more of those entities 30 days or more, but fewer than 60 days late.	The Transmission Operator did not identify or notify Distribution Providers, UFLS-Only Distribution Providers and Transmission Owners, that are required to assist with the mitigation of operating Emergencies in its Transmission Operator Area through Operator-controlled manual Load shedding, undervoltage Load shedding, or underfrequency Load shedding. OR The Transmission Operator identified on an annual basis the Distribution Providers, UFLS-Only Distribution Providers and Transmission Owners, that are required to assist with the mitigation of operating Emergencies in its Transmission Operator Area through Operator-controlled manual Load shedding, undervoltage Load shedding, or underfrequency Load shedding, but notified one or more of

			those entities 60 days or more late.

VSL Justifications for EOP-011-4, Requirement R7	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The requirement is new. Therefore, the proposed VSLs do not have the unintended consequence of lowering the level of compliance.
FERC VSL G2 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	The proposed VSLs are not binary and do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSLs use the same terminology as used in the associated requirement and are, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	Each VSL is based on a single violation and not cumulative violations.

VRF Justifications for EOP-011-4, Requirement R8	
Proposed VRF	**High**
NERC VRF Discussion	A VRF of High is appropriate due to the fact that a lack of a Load shedding plan 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. Therefore, it is in line with the definition of a High VRF.
FERC VRF G1 Discussion Guideline 1- Consistency with Blackout Report	This VRF is in line with the identified areas from the FERC list of critical areas in the Final Blackout Report.
FERC VRF G2 Discussion Guideline 2- Consistency within a Reliability Standard	The assignment of High VRF is consistent with the VRF assignments for other requirements in the proposed Reliability Standard. This requirement has only a main VRF and no different sub-requirement VRFs.
FERC VRF G3 Discussion Guideline 3- Consistency among Reliability Standards	This VRF is in line with other VRFs that address similar reliability goals in different Reliability Standards.
FERC VRF G4 Discussion Guideline 4- Consistency with NERC Definitions of VRFs	This VRF is in line with the definition of a High VRF requirement per the criteria filed with FERC as part of the ERO's Sanctions Guidelines.
FERC VRF G5 Discussion Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation	This requirement does not mingle a higher risk reliability objective and a lesser risk reliability objective. Therefore, the VRF reflects the risk of the whole requirement.

VSLs for EOP-011-4, Requirement R8			
Lower	**Moderate**	**High**	**Severe**
N/A	The applicable Distribution Provider, UFLS-Only Distribution Provider, and Transmission Owner developed a Load shedding plan(s), but failed to maintain it in accordance with Requirement R8.	The applicable Distribution Provider, UFLS-Only Distribution Provider, and Transmission Owner developed a Load shedding plan(s), but failed to provide it to its Transmission Operator in accordance with Requirement R8.	The applicable Distribution Provider, UFLS-Only Distribution Provider, and Transmission Owner failed to develop a Load shedding plan(s) in accordance with Requirement R8. OR The Distribution Provider, UFLS-Only Distribution Provider, and Transmission Owner developed a Load shedding plan(s), but failed to implement it in accordance with Requirement R8.

TOP-002-5

VRF Justification for TOP-002-5, Requirement R1
The VRF did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VSL Justification for TOP-002-5, Requirement R1
The VSL did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VRF Justification for TOP-002-5, Requirement R2
The VRF did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VSL Justification for TOP-002-5, Requirement R2

The VSL did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VRF Justification for TOP-002-5, Requirement R3
The VRF did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VSL Justification for TOP-002-5, Requirement R3
The VSL did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VRF Justification for TOP-002-5, Requirement R4
The VRF did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VSL Justification for TOP-002-5, Requirement R4
The VSL did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VRF Justification for TOP-002-5, Requirement R5
The VRF did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VSL Justification for TOP-002-5, Requirement R5
The VSL did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VRF Justification for TOP-002-5, Requirement R6
The VRF did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VSL Justification for TOP-002-5, Requirement R6
The VSL did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VRF Justification for TOP-002-5, Requirement R7
The VRF did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VSL Justification for TOP-002-5, Requirement R7
The VSL did not change from the previously FERC approved TOP-002-4 Reliability Standard.

VRF Justifications for TOP-002-5, Requirement R8	
Proposed VRF	**Medium**
NERC VRF Discussion	A VRF of Medium is appropriate due to the fact that not having an Operating Process to identify cold weather and calculate appropriate demand and reserves while accounting for generating unit operation limitations could directly affect the electrical state or the capability of the bulk electric system. In addition, a violation of this 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. Therefore, it is in line with the definition of a Medium VRF.
FERC VRF G1 Discussion Guideline 1- Consistency with Blackout Report	This VRF is in line with the identified areas from the FERC list of critical areas in the Final Blackout Report.
FERC VRF G2 Discussion Guideline 2- Consistency within a Reliability Standard	The assignment of Medium VRF is consistent with the VRF assignments for other requirements in the proposed Reliability Standard. This requirement has only a main VRF and no different sub-requirement VRFs.
FERC VRF G3 Discussion Guideline 3- Consistency among Reliability Standards	This VRF is in line with other VRFs that address similar reliability goals in different Reliability Standards.
FERC VRF G4 Discussion Guideline 4- Consistency with NERC Definitions of VRFs	This VRF is in line with the definition of a medium VRF requirement per the criteria filed with FERC as part of the ERO's Sanctions Guidelines.
FERC VRF G5 Discussion Guideline 5- Treatment of Requirements that Co-mingle More than One Obligation	This requirement does not mingle a higher risk reliability objective and a lesser risk reliability objective. Therefore, the VRF reflects the risk of the whole requirement.

VSLs for TOP-002-5, Requirement R8			
Lower	**Moderate**	**High**	**Severe**
N/A	The Balancing Authority had an extreme cold weather Operating Process addressing preparations for and operations during extreme cold weather periods, but it did not address one of the Requirements or sub-Requirements of R8 Parts 8.1 through 8.3.	The Balancing Authority had an extreme cold weather Operating Process addressing preparations for and operations during extreme cold weather periods, but it did not address two of the Requirements or sub-Requirements of R8 Parts 8.1 through 8.3.	The Balancing Authority did not have an extreme cold weather Operating Process addressing preparations for and operations during extreme cold weather periods.

VSL Justifications for TOP-002-5, Requirement R8	
FERC VSL G1 Violation Severity Level Assignments Should Not Have the Unintended Consequence of Lowering the Current Level of Compliance	The requirement is new. Therefore, the proposed VSLs do not have the unintended consequence of lowering the level of compliance.
FERC VSL G2 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	The proposed VSLs are not binary and do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations.
FERC VSL G3 Violation Severity Level Assignment Should Be Consistent with the Corresponding Requirement	The proposed VSLs use the same terminology as used in the associated requirement and are, therefore, consistent with the requirement.
FERC VSL G4 Violation Severity Level Assignment Should Be Based on A Single Violation, Not on A Cumulative Number of Violations	Each VSL is based on a single violation and not cumulative violations.