

The background of the slide features a large, stylized image of a high-voltage electrical transmission tower on the right side, set against a light blue sky. A thick orange horizontal band runs across the middle of the slide. Below this band, a faint map of North America is visible in the lower-left corner. The NERC logo is positioned in the upper-left corner, consisting of the letters 'NERC' in a large, bold, black sans-serif font, with a horizontal blue bar underneath. Below the bar, the full name 'NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION' is written in a smaller, black, all-caps sans-serif font.

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Violation Severity Levels Development Guidelines Criteria

to ensure
the reliability of the
bulk power system

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Introduction

NERC and the industry continue to develop and refine reliability standards establishing what registered entities must do in their planning and operating activities for assets that are part of, and that impact, the reliability of the North American bulk power systems.

One modification is the addition of Violation Severity Levels (VSLs) with detailed parameters as one of several key elements within NERC Reliability Standards.¹ VSLs are defined as measurements of the degree by which an entity has failed to meet a requirement within a reliability standard. The determination of the VSL is made after an entity has been identified as being noncompliant with a standard's requirement. There are up to four VSLs used as a factor in assessing the penalty associated with non-compliance with a standard requirement. The four VSLs are: Lower, Moderate, High, and Severe.²

These VSL Guidelines provide direction to support the development of specific and consistent VSLs over the wide range of standard requirements.

The VSL Guidelines include three types of tables:

- A single VSL definitions table, which provides overarching guidance on criteria for setting VSLs
- Individual category criteria tables for each of the categories of requirements found in the standards, which is discussed in more detail in Chapter 1; and
- Illustration tables for each category criteria table.

Purpose

The VSL Guidelines provide direction for a specific and consistent approach for use by current and future NERC standard drafting teams when assigning VSLs to each requirement contained within their assigned NERC reliability standard. This criterion has been applied in the initial development of VSLs for each of the original 83 regulatory-approved standards to satisfy the FERC directive to have existing Levels of Non-Compliance replaced with VSLs on all requirements which have a Violation Risk Factor (VRF) by March 1, 2008.

¹ Key elements within a NERC Reliability Standard include Title, Applicability, Effective Date, Purpose, Requirements, Violation Risk Factors, Time Horizons, Measures, Regional Variances, and Associated References.

² Violation Risk Factors measure the expected or potential impact in terms of *risk* of a violation on the reliability of the bulk power system. Violation Severity Levels measure the *severity* of a violation after it has occurred, not the risk.

These VSL Guidelines will be incorporated into the NERC Standards Drafting Team Guidelines for use by the standard drafting teams in future standard revisions and during the development of new standards.

Clarification of Violation Risk Factors and Violation Severity Levels

Congress charged FERC to implement its responsibilities of the 2005 Energy Policy Act, which imparts a high degree of urgency to establish all of the tools necessary to implement the Compliance Monitoring and Enforcement Program (CMEP) and the Sanctions Guidelines. Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) are elements of reliability standards used for compliance that were not in place when Version 0 standards were developed.

The Sanctions Guidelines use VRFs and VSLs as two of the primary factors in determining the size of a civil penalty or sanction. While VRFs and VSLs both contribute to the determination of a sanction, they are distinctly different.

- The VRF addresses the potential adverse impact that non-compliance with a standard requirement could have on the bulk power system.
- The VSL addresses how compliant or non-compliant an entity is with a specific requirement, and does not consider the ‘importance’ of the requirement or reliability-related risk of a violation of the requirement.

While there can be a menu of up to four different VSLs for the violation of each requirement, a VSL is only assigned to a specific infraction after it has been determined that a NERC reliability standard requirement has been violated. To ensure a consistent approach in assessing the level of non-compliance over a wide range of standard requirements, the VSL DT developed a set of generic criteria for VSLs that can be applied to various categories of requirements. These generic VSL criteria are used in classifying and identifying the degree or level to which an entity has failed to satisfy a standard requirement after non-compliance has been identified. The VSL drafting team and industry, based on comments received on the initial issue of the VSL Guidelines, have struggled with the interplay between VRFs and VSLs.

In an attempt to further clarify the distinction between VRFs and VSLs, we offer the following example. (VRFs are designed to assess the risk of a violation of a requirement and VSLs are designed to identify the degree to which a requirement has been violated.)

There are 2 requirements:

- Requirement 1 speed limit of 20 MPH for a school zone — Violation Risk Factor = High
- Requirement 2 speed limit of 45 MPH for a country road — Violation Risk Factor = Lower

The VSL for each requirement can be based on the same criteria. For example, violating the speed limit by 10% is a lower violation severity level, while violating the speed limit by 100% is a severe violation severity level.

Penalties are set for violations depending on the combination of risk and severity levels.

There are four violation severity levels:

Lower — up to 15% over the posted speed limit

Moderate — from 15 % to 25% over the posted speed limit

High — from 25% to 35% over the posted speed limit

Severe — 35% or more over the posted speed limit

Consider the motor vehicle speed limit as an example. The speed limit in the school zone is 20 miles per hour. Since it is a school zone the “Violation Risk Factor” or potential impact of speeding is higher than on a highway.

- If Motorist A were stopped for traveling at a speed of 22 miles per hour in a school zone, which is in violation of the posted speed limit, the level of the violation (VSL) could be considered minor (exceeds speed limit by 10%) (High VRF, Low VSL)
- If Motorist A were stopped for traveling at a speed of 50 miles per hour on a country road, which is in violation of the posted speed limit, the level of the violation (VSL) could be considered minor (exceeds speed limit by 10%) (Lower VRF, Low VSL)
- If Motorist B were stopped for traveling at a speed of 40 miles per hour in a school zone, which is in violation of the posted speed limit, the level of the violation (VSL) could be considered severe (exceeds speed limit by 100%). (High VRF, Severe VSL)
- If Motorist B were stopped for traveling at a speed of 90 miles per hour on a country road, which is in violation of the posted speed limit, the level of violation (VSL) could be considered severe (exceeds speed limit by 100%) (Lower VRF, Severe VSL)

It is at the point where 20 mph has been exceeded that we may say that a violation has occurred. Prior to reaching 20 mph, VSLs cannot even be considered since there is no violation. However, once a violation has occurred, we can consider how severe the violation was and in conjunction with other factors (including the VRF and any mitigating circumstances), determine the size of the penalty or sanction.

In both cases the motorists violated the speed limit and would be subject to penalty. The level of the penalty would be comprised of two factors³:

³ Note that this is a simplified example and the ERO Sanctions Guidelines use several additional factors to make the final determination of an actual sanction.

- The violation occurred in a school zone, which made it a high “Violation Risk Factor” violation.
- The magnitude of the violation, or “Violation Severity Level” of 2 miles over the limit could be a “minor violation,” compared with 20 miles over the limit, which could be a “severe” violation.

The penalties related to a speeding infraction range from a warning (for minimally exceeding the requirement) to a loss of driving privileges (for severely exceeding the requirement). The speeding ticket analogy clearly shows that there are degrees of penalty for not observing a posted speed limit. Similarly, the VSLs are intended to describe the degree to which a standard requirement has been violated and VRFs, which are predetermined prior to any violation occurring, determine the potential risk to reliability for violating a requirement.

Scope

To monitor and enforce compliance with the mandatory standards consistent with NERC’s Sanctions Guidelines as well as the Compliance Monitoring and Enforcement Program, the use of VSLs is required to help determine the size of a monetary penalty or sanction. Because the FERC-approved reliability standards only contained “levels of non-compliance,” the Sanctions Guidelines cannot be fully used. As such, FERC ordered the replacement of the previous levels of non-compliance with new VSLs, which will enable the full use of the Sanctions Guidelines.

Recognizing that the previous levels of non-compliance assessed the reliability-related risk of violating a requirement and did not consider the degree from which compliance was not satisfied, the new ERO Sanctions Guidelines separate risk (VRFs) from the degree of non-compliance (VSLs). VSLs do not assess “importance” or “reliability-related risk” associated with violating a NERC reliability standard requirement, only the level of the responsible entity’s compliance.

The scope of the VSL DT is limited to developing this set of guidelines, and to working with other drafting teams and stakeholders to establish a set of VSLs for the 83 regulatory-approved standards. Stakeholders have asked the VSL DT for more information about the application of VSLs in real-time. Additional details about the application of VSLs by the Compliance Monitoring and Enforcement Authority in determining the size of a penalty or sanction for the violation of a specific requirement are contained within the [ERO’s Rules of Procedure](#), specifically the [Sanctions Guidelines \(Appendix 4B\)](#), and the [Uniform Compliance Monitoring and Enforcement Program \(Appendix 4C\)](#).

The VSL Guidelines document and the criteria written within were developed to be applied to all requirements, including sub-requirements, to the maximum extent achievable, for the 83 regulatory-approved standards. Some exceptions may be needed for certain requirements as they currently exist in the 83 regulatory-approved standards until such time as these standards are revised by standard drafting teams.

The VSL DT collaborated with other existing standard drafting teams to develop VSLs for each requirement contained within the FERC-approved reliability standards using the guidance contained in this guideline document. The VSL DT recognized that very specific VSL guidance

can not be written to envelop all potential combinations of the numerous factors that may be necessary to satisfy a specific standard requirement.

It is the belief of the VSL DT that these generic criteria can be understood and applied consistently by the respective SMEs to develop requirement-specific VSLs.

The VSL Guidelines articulate a consistent approach to establish the degree to which a particular reliability standard requirement was violated for the purpose of assignment of a Violation Severity Level. The VSL DT has collaborated with existing NERC Standard drafting teams to:

- Obtain industry input and expertise for the various standards and groups of standards;
- Review the Violation Severity Level Guidelines drafted by the VSL DT;
- Confirm or change the Violation Severity Level matrices; and
- Suggest changes to improve the VSL guidelines and criteria presented here for establishing Violation Severity Levels.

The VSL DT assessed the Standard drafting teams' solicited input and pre-ballot comments and has reviewed the proposed changes to the VSL descriptions and levels and revised the guidelines and criteria for consistency. The results of those efforts are presented in the set of [VSLs posted for stakeholder review](#) and ballot.

Background

The NERC Sanctions Guidelines establish how violations of mandatory and enforceable reliability standards will be sanctioned. To monitor and enforce compliance with these mandatory and enforceable standards, NERC's Sanctions Guidelines require the use of Violation Severity Levels as a factor in determining the magnitude of a non-compliance sanction. However, no FERC approved NERC reliability standard currently contains Violation Severity Levels. This established the need to develop a process to assign detailed and consistent Violation Severity Levels for all reliability standard requirements regardless of their status of development or approval, but especially for the standards that have been approved as mandatory and enforceable by one or more regulatory authorities. FERC has:

- Approved an interim process for the purpose of determining sanctions, the use of the current Levels of Non-Compliance, where they exist, in the FERC-approved standards,⁴ and
- Directed NERC to supplement the FERC approved standards without re-issue of the associated standards by March 1, 2008 as follows:

⁴ To enable appropriate determinations of penalty amounts for violations on the 83 standards, the Commission-approved reliability standards, the Commission adopted an interim measure to use Levels of non-compliance. This interim measure is discussed in the June 7 *Order on Compliance Filing*, paragraph 79-80.

- Replace the existing Levels of Non-Compliance with Violation Severity Levels; and
- Assign Violation Severity Levels to all FERC approved reliability standards.

In late June 2007, a Standards Authorization Request (SAR) was submitted to address this issue. The Standards Committee approved the SAR in July 2007, with initial appointments to the drafting team approved in August 2007. The SAR to Replace Levels of Non-compliance with Violation Severity Levels is Project 2007-23 in the Reliability Standards Development Plan 2008-2010. The drafting team is tasked with developing criteria to develop and assign Violation Severity Levels, and with assigning the initial set of Violation Severity Levels to each requirement and sub-requirement of each of the Standards approved by FERC.

Chapter 1, Overview — Violation Severity Level Guidelines

The VSL Guidelines present a consistent approach to assess the degree to which a particular reliability standard requirement was violated.

The VSL DT has reviewed and considered the comments to the SAR and incorporated, where appropriate, the suggestions supplied in the comments in developing the following guidelines. The VSL DT classified the requirements and sub-requirements as follows and developed criteria for assigning at least one VSL to each category. At times some requirements may appear to fit in more than one category; however, the standard drafting teams were asked to provide rationale when choosing one category over another resulting in the assignment of a category for the most prevailing category based on importance of a requirement (or sub-requirement).

- 1. Procedure/Program**
- 2. Implementation/Execution**
- 3. Reporting**
- 4. Coordination/Communication**
- 5. Numeric Performance**
- 6. Multi-Component**
- 7. Requirements without Violation Risk Factor Assigned (N/A)**

The above classifications were developed to define the multiple types of requirements contained in the FERC-approved standards and to assign VSLs to those requirements and sub-requirements containing VRFs. To the extent that the existing Levels of Non-Compliance contained in the current approved standards are specific to a unique requirement, those criteria were given strong consideration in the development of VSLs. It is important to keep in mind the distinction between VRFs and VSLs. VRFs are used to quantify the significance of the impact on reliability, which could result from violating a requirement. The VRFs are determined before any violation occurs. VSLs are used to quantify the degree to which an entity failed to satisfy a standard requirement and therefore, can only be used after it has been determined that a violation has occurred.

The following guidelines should be used for establishing and assigning VSLs keeping in mind the following:

- Every requirement must have at least one VSL unless it does not have a Violation Risk Factor⁵ assigned to it, and
- Not all requirements need to have multiple Violation Severity Levels

The VSL DT used these criteria to apply VSLs to all the requirements in the 83 FERC-approved standards. The following generic criteria are being proposed as guidance for identifying the appropriate classification and the assignment of VSLs to each requirement. As standards are revised or created, generic terms such as “minor” and “significant elements” should be replaced by drafting teams with specific and measurable details in the actual VSL descriptions.

The following table shows a general approach to assigning VSLs. The VSL tables are comprised of two elements; the VSL ranging for “Lower” to “Severe”, and the “level description”. The “level description” provides guidance as to what constitutes a specific violation level for the category of the requirement.

The four generic definitions of severity level form the overall basis for assigning VSLs to each requirement. The specific applications are developed in the subsequent chapters.

Figure 1: Sample Violation Severity Levels Criteria Definitions Table

Lower	Moderate	High	Severe
The responsible entity is non-compliant with respect to one or more minor details within the requirement.	The responsible entity is non-compliant with respect to at least one significant element within the requirement.	The responsible entity is non-compliant with respect to two or more significant elements within the requirement.	The responsible entity is non-compliant with most or all significant elements of the requirement.

⁵ While some of the requirements in the 83 FERC-approved standards do not contain VRFs, all of the standards under development, and all the standards expected to be developed in the future, are expected to include a VRF for each requirement.

Chapter 2, Procedure/Program

The Procedure/Program category establishes a classification of criteria for requirements that direct the responsible entity to have for use an executable program, procedure, protocol, or written guideline document. The following general criteria should be used to develop VSLs for requirements that fall within this classification.

Figure 2: Procedure/Program Criteria Table

Lower	Moderate	High	Severe
The responsible entity's program/ procedure is non-compliant with respect to one or more minor details within the requirement.	The responsible entity's program/ procedure is non-compliant with respect to at least one significant element within the requirement.	The responsible entity's program/ procedure is non-compliant with respect to two or more significant elements within the requirement.	The responsible entity's program/ procedure is non-compliant with most or all the elements of the requirement.

All examples are provided for illustrative purposes only and may not consistently mirror the requirements as presented in approved or revised standards.

Example: FAC-003-1 Requirement R1.

“The Transmission Owner shall prepare, and keep current, a formal transmission vegetation management program (TVMP). The TVMP shall include the Transmission Owner’s objectives, practices, approved procedures and work specifications.”

A sample set of VSLs, showing the application of the generic VSLs from Figure 2 to FAC-003-1 Requirement R1 (Procedure/Program) is shown in two different formats below:

Text View of VSLs:

- *VSL Lower:* The Transmission Owner has a TVMP, but it has not been updated to include changes that are currently in effect, but have not been in effect for more than one month.
- *VSL Moderate:* The Transmission Owner has a TVMP, but it has not been updated to include changes that have been in effect for more than one month, but have not been in effect for more than six months.
- *VSL High:* The Transmission Owner has a TVMP, but it has not been updated to include changes that have been in effect for more than six months.
- *VSL Severe:* The Transmission Owner does not have a TVMP.

Table View of VSLs:

Lower	Moderate	High	Severe
The Transmission Owner has a TVMP, but it has not been updated to include changes that are currently in effect, but have not been in effect for more than one month	The Transmission Owner has a TVMP, but it has not been updated to include changes that have been in effect for more than one month, but have not been in effect for more than six months.	The Transmission Owner has a TVMP, but it has not been updated to include changes that have been in effect for more than six months.	The Transmission Owner does not have TVMP.

Chapter 3 — Implementation/Execution

The Implementation/Execution category establishes a classification of criteria for requirements that direct the responsible entity to implement or execute a program, procedure requirement, or directives. The following criteria should be used to develop Violation Severity Levels for standards requirements that meet this description.

Figure 3: Implementation/Execution Criteria Table

Lower	Moderate	High	Severe
The responsible entity's implementation/execution is non-compliant with respect to one or more minor details within the requirement.	The responsible entity's implementation/execution is non-compliant with respect to one significant element within the requirement.	The responsible entity's implementation/execution is non-compliant with respect to more than one significant element within the requirement.	The responsible entity's implementation/execution is non-compliant with most or all the elements of the requirement.

All examples are provided for illustrative purposes only and may not consistently mirror the requirements as presented in approved or revised standards.

Example: FAC-003-1 Requirement R1.3.

“All personnel directly involved in the design and implementation of the TVMP shall hold appropriate qualifications and training, as defined by the Transmission Owner, to perform their duties.”

A sample set of VSLs, showing the application of the generic VSLs from Figure 3 to FAC-003-1 Requirement R1.3 (Implementation/Execution) is shown in two different formats below:

Text View of VSLs:

- *VSL Lower:* One or more persons directly involved in the design and implementation of the TVMP (but not more than 35% of the all personnel involved), did not hold appropriate qualifications and training to perform their duties.
- *VSL Moderate:* More than 35% of all personnel directly involved in the design and implementation of the TVMP (but not more than 70% of all personnel involved), did not hold appropriate qualifications and training to perform their duties.
- *VSL High:* More than 70% of all personnel directly involved in the design and implementation of the TVMP (but not 100% of all personnel involved), did not hold appropriate qualifications and training to perform their duties.
- *VSL Severe:* None of the persons directly involved in the design and implementation of the Transmission Owner's TVMP held appropriate qualifications and training to perform their duties.

Table View of VSLs:

Lower	Moderate	High	Severe
One or more persons directly involved in the design and implementation of the TVMP (but not more than 35% of the all personnel involved), did not hold appropriate qualifications and training to perform their duties.	More than 35% of all personnel directly involved in the design and implementation of the TVMP (but not more than 70% of all personnel involved), did not hold appropriate qualifications and training to perform their duties	More than 70% of all personnel directly involved in the design and implementation of the TVMP (but not 100% of all personnel involved), did not hold appropriate qualifications and training to perform their duties.	None of the persons directly involved in the design and implementation of the Transmission Owner's TVMP held appropriate qualifications and training to perform their duties.

Chapter 4, Reporting

The Reporting category establishes a classification of criteria that directs the responsible entity to report operational information and/or data to another registered entity or regulatory authority. For clarification purposes, reporting is a one-way correspondence with no response required. The following criteria should be used to develop Violation Severity Levels for standards requirements that meet this description.

Figure 4: Reporting Criteria Table

Lower	Moderate	High	Severe
The responsible entity is non-compliant in the reporting of required information with respect to one or more minor details within the requirement.	The responsible entity is non-compliant in the reporting of required information with respect to at least one significant element within the requirement.	The responsible entity is non-compliant in the reporting of required information with respect to more than one significant element within the requirement.	The responsible entity's reporting is non-compliant with most or all the elements of the requirement.

All examples are provided for illustrative purposes only and may not consistently mirror the requirements as presented in approved or revised standards.

Example: EOP-004-1 Disturbance Reporting Requirement R3.1.

“The affected Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator or Load Serving Entity shall submit within 24 hours of the disturbance or unusual occurrence either a copy of the report submitted to DOE, or, if no DOE report is required, a copy of the NERC Interconnection Reliability Operating Limit and Preliminary Disturbance Report form. Events that are not identified until some time after they occur shall be reported within 24 hours of being recognized.”

A sample set of VSLs, showing the application of the generic VSLs from Figure 4 to EOP-004-1 Requirement R3.1 (Reporting) is shown in two different formats below:

Text View of VSLs:

- *VSL Lower:* The responsible entities submitted the report within 36 hours of the disturbance or discovery of the disturbance.
- *VSL Moderate:* N/A
- *VSL High:* The responsible entities submitted the report within 48 hours of the disturbance or discovery of the disturbance.
- *VSL Severe:* The responsible entities submitted the report within more than 48 hours after the disturbance or discovery of the disturbance.

Table View of VSLs:

Lower	Moderate	High	Severe
The responsible entities submitted the report within 36 hours of the disturbance or discovery of the disturbance.	N/A	The responsible entities submitted the report within 48 hours of the disturbance or discovery of the disturbance.	The responsible entities submitted the report within more than 48 hours after the disturbance or discovery of the disturbance.

Chapter 5, Coordination/Communication

The Coordination/Communication category establishes a classification for standards requirements that direct the responsible entity to coordinate and/or communicate with other required entities. For clarification purposes, Coordination/Communication is considered communication between two or more parties with the expectation of response. The following criteria should be used to develop Violation Severity Levels for standards requirements that meet this description.

Figure 5: Coordination/Communication Criteria Table

Lower	Moderate	High	Severe
The responsible entity's coordination/communication is non-compliant with respect to one or more minor details within the requirement.	The responsible entity's coordination/communication is non-compliant with respect to at least one significant element within the requirement.	The responsible entity's coordination/communication is non-compliant with respect to more than one significant element within the requirement.	The responsible entity's coordination/communication is non-compliant with most or all the elements of the requirement.

All examples are provided for illustrative purposes only and may not consistently mirror the requirements as presented in approved or revised standards.

Example: EOP-003-1 Requirement R3.

“Each Transmission Operator and Balancing Authority shall coordinate load shedding plans among other interconnected Transmission Operators and Balancing Authorities.”

A sample set of VSLs, showing the application of the generic VSLs from Figure 5 to EOP-003-1 Requirement R3 (Coordination/Coordination) is shown in two different formats below:

Text View of VSLs:

- *VLS Lower:* The Transmission Operator and Balancing Authority has demonstrated coordination / communication with required entities with minor exception and is substantially compliant with the directives of the requirement.
- *VLS Moderate:* The Transmission Operator and Balancing Authority has demonstrated coordination or communication with all but one of its TOPs or BAs and is mostly compliant with the directives of the requirement.
- *VSL High:* The Transmission Operator and Balancing Authority has demonstrated coordination or communication with some of its TOPs and BAs but was deficient in meeting the directives of the requirement because multiple interconnected TOPs and BAs were not included.
- *VSL Severe:* The Transmission Operator and Balancing Authority has failed to coordinate load shedding plans among any of its interconnected Transmission Operators and Balancing Authorities.

Table View of VSLs:

Lower	Moderate	High	Severe
The Transmission Operator and Balancing Authority has demonstrated coordination or communication with required entities with minor exception and is substantially compliant with the directives of the requirement.	The Transmission Operator and Balancing Authority has demonstrated coordination or communication with all but one of its TOPs or BAs and is mostly compliant with the directives of the requirement.	The Transmission Operator and Balancing Authority has demonstrated coordination or communication with some of its TOPs and BAs but was deficient in meeting the directives of the requirement because multiple interconnected TOPs and BAs were not included.	The Transmission Operator and Balancing Authority has failed to coordinate load shedding plans among any of its interconnected Transmission Operators and Balancing Authorities.

Chapter 6, Numeric Performance

The Numeric Performance criteria establish three classifications for standards requirements that direct the responsible entity to meet a defined numeric performance level. One of the following three Numeric Performance (NP) methods should be used to develop Violation Severity Levels for standards requirements that meet this description.

NP1. The quartile approach, using straight percentages around the total value or 100%.

NP2. The quartile approach, defining a minimum acceptable value and then applying the four quartiles between the minimum value and 100%. (The minimum acceptable value should be defined and supported by the use of technical supportable criteria).

NP3. In cases where there is a target or a specific value in the current approved mandatory and enforceable standard, use the existing target or value to define the Violation Severity Levels.

Figure 6: Numeric Performance Criteria Table

Lower	Moderate	High	Severe
1 st quartile	2 nd quartile	3 rd quartile	4 th quartile
The responsible entity has failed to meet the minimum acceptable performance of the requirement but has achieved a performance level equal to or above the 75 th percentile of the appropriate measure.	The responsible entity has achieved the measure of performance level below the 75th percentile but equal to or above the 50th percentile of the appropriate measure.	The responsible entity has achieved the measure of performance level below or equal to the 50th percentile but equal to or above the 25th percentile of the appropriate measure.	The responsible entity has achieved the measure of performance level below the 25th percentile of the appropriate measure.

VSLs for **Numerical Requirements** are divided into quartiles as described below:

- Lower: $75\% \leq \text{Normalized Score} < 100\%$.
- Moderate: $50\% \leq \text{Normalized Score} < 75\%$.
- High: $25\% \leq \text{Normalized Score} < 50\%$.
- Severe: $0\% \text{ Normalized Score} < 25\%$.

Three examples of Numeric Performance criteria follow on the next several pages.

All examples are provided for illustrative purposes only and may not consistently mirror the requirements as presented in approved or revised standards.

NP1 Example: BAL-001-0 Real Power Balancing Control Performance Requirement R2.

“Each Balancing Authority shall operate such that its average ACE for at least 90% of clock-ten-minute periods (6 non-overlapping periods per hour) during a calendar month is within a specific limit, referred to as L_{10} .”

For this NP1 Example, the severity levels are determined by applying four equal quartiles between the target percentage and zero.

A sample set of VSLs, showing the application of the generic VSLs from Figure 6 to BAL-001-0 Requirement R2 (Numeric Performance) is shown in two different formats below:

Text View of VSLs:

- *VSL Lower:* The responsible entity is mostly compliant with minor exceptions. Equivalent score: equal to or more than 67.5% but less than 90%.
- *VSL Moderate:* The responsible entity is mostly compliant with significant exceptions. Equivalent score: equal to or more than 45% but less than 67.5%.
- *VSL High:* The responsible entity is marginal in performance or results. Equivalent score: equal to or more than 22.5% but less than 45%.
- *VSL Severe:* The responsible entity is poor in performance or results. Equivalent score: less than 22.5%.

Table View of VSLs:

Lower	Moderate	High	Severe
The responsible entity is mostly compliant with minor exceptions. Equivalent score: equal to or more than 67.5% but less than 90%.	The responsible entity is mostly compliant with significant exceptions. Equivalent score: equal to or more than 45% but less than 67.5%.	The responsible entity is marginal in performance or results. Equivalent score: equal to or more than 22.5% but less than 45%.	The responsible entity is poor in performance or results. Equivalent score: less than 22.5%.

All examples are provided for illustrative purposes only and may not consistently mirror the requirements as presented in approved or revised standards.

NP2 Example: BAL-001-0 Real Power Balancing Control Performance Requirement R2.

“Each Balancing Authority shall operate such that its average ACE for at least 90% of clock-ten-minute periods (6 non-overlapping periods per hour) during a calendar month is within a specific limit, referred to as L_{10} .”

For this NP2 Example, the assumption is made that the minimum acceptable value is a score of 72 (Note: the score of 72 must be supportable and defensible).

A sample set of VSLs, showing the application of the generic VSLs from Figure 6 to BAL-001-0 Requirement R2 (Numeric Performance) is shown in two different formats below:

Text View of VSLs:

- *VSL Lower:* The responsible entity is mostly compliant with minor exceptions. Equivalent score: more than 84 but less than 90.
- *VSL Moderate:* The responsible entity is mostly compliant with significant exceptions. Equivalent score: more than 78 but less than or equal to 84.
- *VSL High:* The responsible entity is marginal in performance or results. Equivalent score: at least 72 but less than or equal to 78.
- *VSL Severe:* The responsible entity is poor in performance or results. Equivalent score: less than 72.

Table View of VSLs:

Lower	Moderate	High	Severe
The responsible entity is mostly compliant with minor exceptions. Equivalent score: more than 84 but less than 90.	The responsible entity is mostly compliant with significant exceptions. Equivalent score: more than 78 but less than or equal to 84.	The responsible entity is marginal in performance or results. Equivalent score: at least 72 but less than or equal to 78.	The responsible entity is poor in performance or results. Equivalent score: less than 72.

All examples are provided for illustrative purposes only and may not consistently mirror the requirements as presented in approved or revised standards.

NP3 Example: BAL-001-0 Real Power Balancing Control Performance Requirement R2.

(taken from Levels of Non-Compliance)

“Each Balancing Authority shall operate such that its average ACE for at least 90% of clock-ten-minute periods (6 non-overlapping periods per hour) during a calendar month is within a specific limit, referred to as L_{10} .”

A sample set of VSLs, showing the application of the generic VSLs from Figure 6 to BAL-001-0 Requirement R2 (Numeric Performance) is shown in two different formats below:

Text View of VSLs:

- *VSL Lower:* The Balancing Authority Area’s value of CPS2 is less than 90% but greater than or equal to 85%.
- *VSL Moderate:* The Balancing Authority Area’s value of CPS2 is less than 85% but greater than or equal to 80%.
- *VSL High:* The Balancing Authority Area’s value of CPS2 is less than 80% but greater than or equal to 75%.
- *VSL Severe:* The Balancing Authority Area’s value of CPS2 is less than 75%.

Table View of VSLs:

Lower	Moderate	High	Severe
The Balancing Authority Area’s value of CPS2 is less than 90% but greater than or equal to 85%.	The Balancing Authority Area’s value of CPS2 is less than 85% but greater than or equal to 80%.	The Balancing Authority Area’s value of CPS2 is less than 80% but greater than or equal to 75%.	The Balancing Authority Area’s value of CPS2 is less than 75%.

Chapter 7, Multi-Component

The Multi-Component category establishes a classification of criteria for requirements that have multiple components or sub-requirements that direct the responsible entity to comply with a multiple number of sub-requirements or sub-sub-requirements. To be considered a multi-component, the requirement must have sub-requirements or requirements listed on an attachment. However, a requirement having a sub-requirement may fall under one of the other categories. The following general criteria should be used to develop Violation Severity Levels for standards requirements that meet this description.

Use of the quartile methodology is suggested.

Figure 6: Multi-Component Criteria Table

Lower	Moderate	High	Severe
The responsible entity failed to comply with less than 25% of the number of sub-components within a requirement.	The responsible entity failed to comply with 25% or more and less than 50% of the number of sub-components within a requirement.	The responsible entity has failed to comply with 50% or more and less than 75% of the number of sub-components within a requirement.	The responsible entity has failed to comply with 75% or more of the number of sub-components.

For a multi-component requirement that contains 20 sub-requirements or elements, the following VSLS apply:

- Lower: 1 missed sub-requirements \leq 5 (Missed at least 1 and up to 5 sub requirements)
- Moderate: 6 = missed sub-requirements \leq 10
- High: 11 = missed sub-requirements \leq 15
- Severe: 16 = missed sub-requirements \leq 20

All examples are provided for illustrative purposes only and may not consistently mirror the requirements as presented in approved or revised standards.

Example 1: EOP-005-1 System Restoration Plans, Requirement R1.

“Each Transmission Operator shall have a restoration plan to reestablish its electric system in a stable and orderly manner in the event of a partial or total shutdown of its system, including necessary operating instructions and procedures to cover emergency conditions, and the loss of vital telecommunications channels. Each Transmission Operator shall include the applicable elements listed in Attachment 1 of EOP-005 in developing a restoration plan.”

A sample set of VSLs, showing the application of the generic VSLs from Figure 6 to EOP-005-1 Requirement R2 (Multi-Component) is shown in two different formats below:

Text View of VSLs:

- *VSL Lower:* The responsible entity failed to comply with less than 25% of the elements listed in Attachment 1.
- *VSL Moderate:* The responsible entity failed to comply with 25% or more and less than 50% of the elements listed in Attachment 1.
- *VSL High:* The responsible entity has achieved a measure of performance equal to or below 50% but above 25% of the elements listed in Attachment 1.
- *VSL Severe:* The responsible entity has achieved a measure of performance equal to or below 25% of the elements listed in Attachment 1.

Table View of VSLs:

Lower	Moderate	High	Severe
The responsible entity failed to comply with less than 25% of the elements listed in Attachment 1.	The responsible entity failed to comply with 25% or more and less than 50% of the elements listed in Attachment 1.	The responsible entity has achieved a measure of performance equal to or below 50% but above 25% of the elements listed in Attachment 1.	The responsible entity has achieved a measure of performance equal to or below 25% of the elements listed in Attachment 1.

All examples are provided for illustrative purposes only and may not consistently mirror the requirements as presented in approved or revised standards.

Example 2: PER-003-0 Load Shedding Plans, Requirement R1.

“Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC-certified for the applicable functions:”

A sample set of VSLs, showing the application of the generic VSLs from Figure 6 to PER-003-0 Requirement R1 (Multi-Component) is shown in two different formats below:

Text View of VSLs:

- *VSL Lower:* The responsible entity failed to staff an operating position with NERC certified personnel for greater than 0 hours and less 12 hours for any operating position for a calendar month.
- *VSL Moderate:* The responsible entity failed to staff an operating position with NERC certified personnel for greater than 12 hours and less 36 hours for any operating position for a calendar month.
- *VSL High:* The responsible entity failed to staff an operating position with NERC certified personnel for greater than 36 hours and less 72 hours for any operating position for a calendar month.
- *VSL Severe:* The responsible entity failed to staff an operating position with NERC certified personnel for greater than 72 hours for any operating position for a calendar month.

Table View of VSLs:

Lower	Moderate	High	Severe
The responsible entity failed to staff an operating position with NERC certified personnel for greater than 0 hours and less than 12 hours for any operating position for a calendar month.	The responsible entity failed to staff an operating position with NERC certified personnel for greater than 12 hours and less than 36 hours for any operating position for a calendar month.	The responsible entity failed to staff an operating position with NERC certified personnel for greater than 36 hours and less than 72 hours for any operating position for a calendar month.	The responsible entity failed to staff an operating position with NERC certified personnel for greater than 72 hours for any operating position for a calendar month.

All examples are provided for illustrative purposes only and may not consistently mirror the requirements as presented in approved or revised standards.

Chapter 8, Requirements without VRF Assigned

Some requirements do not have an assigned Violation Risk Factor.⁶ For these requirements, it is not necessary to assign a Violation Severity Level. These requirements will be assigned a Violation Severity Level of Not Applicable (N/A).

Example: BAL-002-0 Disturbance Control Performance Requirement R4.2.

“The default Disturbance Recovery Period is 15 minutes after the start of a Reportable Disturbance. This period may be adjusted to better suit the needs of an Interconnection based on analysis approved by the NERC Operating Committee.”

A sample set of VSLs, showing the application of “Not Applicable” as a VSL for requirements without a Violation Risk Factor in BAL-002-0 Requirement R4.2 is shown in two different formats below:

Text View of VSLs:

- *VSL Lower:* N/A (Requirement R4.2. does not have an assigned Violation Risk Factor and does not need a Violation Severity Level assignment.)
- *VSL Moderate:* N/A.
- *VSL High:* N/A.
- *VSL Severe:* N/A.

Table View of VSLs:

Lower	Moderate	High	Severe
(Requirement R4.2. does not have an assigned Violation Risk Factor and does not need a Violation Severity Level assignment) N/A.	N/A	N/A	N/A

⁶ Currently there are 12 requirements within the FERC-approved standards that do not have an assigned Violation Risk Factor. They include: BAL-002-0 (R4.2.; R5.1.; R5.2.; R6.1.); BAL-005-0 (R1.); EOP-004-1 (R3.2.); IRO-006-3 (R2.1.; R2.2.: R2.3.); PRC-001-1 (R3.); and TOP-003-0 (R1.).