

The following table lists the Violation Risk Factors (VRF s) for the Version 0 Transmission Planning standards requirements. These VRFs are the weighted average of the stakeholder VRF selections from the second posting of the VRF survey.

**VIOLATION RISK FACTORS – VERSION 0 STANDARDS PRE-BALLOT MATRIX**

<b>Standard Number</b>	<b>Requirement Number</b>	<b>Requirement</b>	<b>Violation Risk Factor</b>
TPL-001-0	R1.	The Planning Authority and Transmission Planner shall each demonstrate through a valid assessment that its portion of the interconnected transmission system is planned such that, with all transmission facilities in service and with normal (pre-contingency) operating procedures in effect, the Network can be operated to supply projected customer demands and projected Firm (non- recallable reserved) Transmission Services at all Demand levels over the range of forecast system demands, under the conditions defined in Category A of Table I. To be considered valid, the Planning Authority and Transmission Planner assessments shall:	HIGH
TPL-001-0	R1.1.	Be made annually.	MEDIUM
TPL-001-0	R1.2.	Be conducted for near-term (years one through five) and longer-term (years six through ten) planning horizons.	MEDIUM
TPL-001-0	R1.3.	Be supported by a current or past study and/or system simulation testing that addresses each of the following categories, showing system performance following Category A of Table 1 (no contingencies). The specific elements selected (from each of the following categories) shall be acceptable to the associated Regional Reliability Organization(s).	MEDIUM
TPL-001-0	R1.3.1.	Cover critical system conditions and study years as deemed appropriate by the entity performing the study.	MEDIUM
TPL-001-0	R1.3.2.	Be conducted annually unless changes to system conditions do not warrant such analyses.	MEDIUM
TPL-001-0	R1.3.3.	Be conducted beyond the five-year horizon only as needed to address identified marginal conditions that may have longer lead-time solutions.	MEDIUM
TPL-001-0	R1.3.4.	Have established normal (pre-contingency) operating procedures in place.	MEDIUM
TPL-001-0	R1.3.5.	Have all projected firm transfers modeled.	MEDIUM
TPL-001-0	R1.3.6.	Be performed for selected demand levels over the range of forecast system demands.	MEDIUM
TPL-001-0	R1.3.7.	Demonstrate that system performance meets Table 1 for Category A (no contingencies).	MEDIUM
TPL-001-0	R1.3.8.	Include existing and planned facilities.	MEDIUM
TPL-001-0	R1.3.9.	Include Reactive Power resources to ensure that adequate reactive resources are available to meet system performance.	MEDIUM
TPL-001-0	R1.4.	Address any planned upgrades needed to meet the performance requirements of Category A.	MEDIUM
TPL-001-0	R2.	When system simulations indicate an inability of the systems to respond as prescribed in Reliability Standard TPL-001-0_R1, the Planning Authority and Transmission Planner shall each:	MEDIUM

<b>Standard Number</b>	<b>Requirement Number</b>	<b>Requirement</b>	<b>Violation Risk Factor</b>
TPL-001-0	R2.1.	Provide a written summary of its plans to achieve the required system performance as described above throughout the planning horizon.	MEDIUM
TPL-001-0	R2.1.1.	Including a schedule for implementation.	MEDIUM
TPL-001-0	R2.1.2.	Including a discussion of expected required in-service dates of facilities.	MEDIUM
TPL-001-0	R2.1.3.	Consider lead times necessary to implement plans.	MEDIUM
TPL-001-0	R2.2.	Review, in subsequent annual assessments, (where sufficient lead time exists), the continuing need for identified system facilities. Detailed implementation plans are not needed.	LOWER
TPL-001-0	R3.	The Planning Authority and Transmission Planner shall each document the results of these reliability assessments and corrective plans and shall annually provide these to its respective NERC Regional Reliability Organization(s), as required by the Regional Reliability Organization.	LOWER
TPL-002-0	R1.	The Planning Authority and Transmission Planner shall each demonstrate through a valid assessment that its portion of the interconnected transmission system is planned such that the Network can be operated to supply projected customer demands and projected Firm (non-recallable reserved) Transmission Services, at all demand levels over the range of forecast system demands, under the contingency conditions as defined in Category B of Table I. To be valid, the Planning Authority and Transmission Planner assessments shall:	MEDIUM
TPL-002-0	R1.1.	Be made annually.	MEDIUM
TPL-002-0	R1.2.	Be conducted for near-term (years one through five) and longer-term (years six through ten) planning horizons.	MEDIUM
TPL-002-0	R1.3.	Be supported by a current or past study and/or system simulation testing that addresses each of the following categories,, showing system performance following Category B of Table 1 (single contingencies). The specific elements selected (from each of the following categories) for inclusion in these studies and simulations shall be acceptable to the associated Regional Reliability Organization(s).	MEDIUM
TPL-002-0	R1.3.1.	Be performed and evaluated only for those Category B contingencies that would produce the more severe System results or impacts. The rationale for the contingencies selected for evaluation shall be available as supporting information. An explanation of why the remaining simulations would produce less severe system results shall be available as supporting information.	MEDIUM
TPL-002-0	R1.3.10.	Include the effects of existing and planned protection systems, including any backup or redundant systems.	MEDIUM
TPL-002-0	R1.3.11.	Include the effects of existing and planned control devices.	MEDIUM
TPL-002-0	R1.3.12.	Include the planned (including maintenance) outage of any bulk electric equipment (including protection systems or their components) at those demand levels for which planned (including maintenance) outages are performed.	MEDIUM

<b>Standard Number</b>	<b>Requirement Number</b>	<b>Requirement</b>	<b>Violation Risk Factor</b>
TPL-002-0	R1.3.2.	Cover critical system conditions and study years as deemed appropriate by the responsible entity.	MEDIUM
TPL-002-0	R1.3.3.	Be conducted annually unless changes to system conditions do not warrant such analyses.	MEDIUM
TPL-002-0	R1.3.4.	Be conducted beyond the five-year horizon only as needed to address identified marginal conditions that may have longer lead-time solutions.	MEDIUM
TPL-002-0	R1.3.5.	Have all projected firm transfers modeled.	MEDIUM
TPL-002-0	R1.3.6.	Be performed and evaluated for selected demand levels over the range of forecast system Demands.	MEDIUM
TPL-002-0	R1.3.7.	Demonstrate that system performance meets Category B contingencies.	MEDIUM
TPL-002-0	R1.3.8.	Include existing and planned facilities.	MEDIUM
TPL-002-0	R1.3.9.	Include Reactive Power resources to ensure that adequate reactive resources are available to meet system performance.	MEDIUM
TPL-002-0	R1.4.	Address any planned upgrades needed to meet the performance requirements of Category B of Table I.	MEDIUM
TPL-002-0	R1.5.	Consider all contingencies applicable to Category B.	MEDIUM
TPL-002-0	R2.	When System simulations indicate an inability of the systems to respond as prescribed in Reliability Standard TPL-002-0_R1, the Planning Authority and Transmission Planner shall each:	MEDIUM
TPL-002-0	R2.1.	Provide a written summary of its plans to achieve the required system performance as described above throughout the planning horizon:	MEDIUM
TPL-002-0	R2.1.1.	Including a schedule for implementation.	MEDIUM
TPL-002-0	R2.1.2.	Including a discussion of expected required in-service dates of facilities.	MEDIUM
TPL-002-0	R2.1.3.	Consider lead times necessary to implement plans.	MEDIUM
TPL-002-0	R2.2.	Review, in subsequent annual assessments, (where sufficient lead time exists), the continuing need for identified system facilities. Detailed implementation plans are not needed.	MEDIUM
TPL-002-0	R3.	The Planning Authority and Transmission Planner shall each document the results of its Reliability Assessments and corrective plans and shall annually provide the results to its respective Regional Reliability Organization(s), as required by the Regional Reliability Organization.	LOWER
TPL-003-0	R1.	The Planning Authority and Transmission Planner shall each demonstrate through a valid assessment that its portion of the interconnected transmission systems is planned such that the network can be operated to supply projected customer demands and projected Firm (non-recallable reserved) Transmission Services, at all demand Levels over the range of forecast system demands, under the contingency conditions as defined in Category C of Table I (attached). The controlled interruption of customer Demand, the planned removal of generators, or the Curtailment of firm (non-recallable reserved) power transfers may be necessary to meet this standard. To be valid, the Planning Authority and Transmission Planner assessments shall:	HIGH

<b>Standard Number</b>	<b>Requirement Number</b>	<b>Requirement</b>	<b>Violation Risk Factor</b>
TPL-003-0	R1.1.	Be made annually.	MEDIUM
TPL-003-0	R1.2.	Be conducted for near-term (years one through five) and longer-term (years six through ten) planning horizons.	MEDIUM
TPL-003-0	R1.3.	Be supported by a current or past study and/or system simulation testing that addresses each of the following categories, showing system performance following Category C of Table 1 (multiple contingencies). The specific elements selected (from each of the following categories) for inclusion in these studies and simulations shall be acceptable to the associated Regional Reliability Organization(s).	MEDIUM
TPL-003-0	R1.3.1.	Be performed and evaluated only for those Category C contingencies that would produce the more severe system results or impacts. The rationale for the contingencies selected for evaluation shall be available as supporting information. An explanation of why the remaining simulations would produce less severe system results shall be available as supporting information.	MEDIUM
TPL-003-0	R1.3.2.	Cover critical system conditions and study years as deemed appropriate by the responsible entity.	MEDIUM
TPL-003-0	R1.3.3.	Be conducted annually unless changes to system conditions do not warrant such analyses.	MEDIUM
TPL-003-0	R1.3.4.	Be conducted beyond the five-year horizon only as needed to address identified marginal conditions that may have longer lead-time solutions.	MEDIUM
TPL-003-0	R1.3.5.	Have all projected firm transfers modeled.	MEDIUM
TPL-003-0	R1.3.6.	Be performed and evaluated for selected demand levels over the range of forecast system demands.	MEDIUM
TPL-003-0	R1.3.7.	Demonstrate that System performance meets Table 1 for Category C contingencies.	MEDIUM
TPL-003-0	R1.3.8.	Include existing and planned facilities.	MEDIUM
TPL-003-0	R1.3.9.	Include Reactive Power resources to ensure that adequate reactive resources are available to meet System performance.	MEDIUM
TPL-003-0	R1.3.10.	Include the effects of existing and planned protection systems, including any backup or redundant systems.	MEDIUM
TPL-003-0	R1.3.11.	Include the effects of existing and planned control devices.	MEDIUM
TPL-003-0	R1.3.12.	Include the planned (including maintenance) outage of any bulk electric equipment (including protection systems or their components) at those Demand levels for which planned (including maintenance) outages are performed.	MEDIUM
TPL-003-0	R1.4.	Address any planned upgrades needed to meet the performance requirements of Category C.	MEDIUM
TPL-003-0	R1.5.	Consider all contingencies applicable to Category C.	MEDIUM
TPL-003-0	R2.	When system simulations indicate an inability of the systems to respond as prescribed in Reliability Standard TPL-003-0_R1, the Planning Authority and Transmission Planner shall each:	MEDIUM

<b>Standard Number</b>	<b>Requirement Number</b>	<b>Requirement</b>	<b>Violation Risk Factor</b>
TPL-003-0	R2.1.	Provide a written summary of its plans to achieve the required system performance as described above throughout the planning horizon:	MEDIUM
TPL-003-0	R2.1.1.	Including a schedule for implementation.	MEDIUM
TPL-003-0	R2.1.2.	Including a discussion of expected required in-service dates of facilities.	MEDIUM
TPL-003-0	R2.1.3.	Consider lead times necessary to implement plans.	MEDIUM
TPL-003-0	R2.2.	Review, in subsequent annual assessments, (where sufficient lead time exists), the continuing need for identified system facilities. Detailed implementation plans are not needed.	LOWER
TPL-003-0	R3.	The Planning Authority and Transmission Planner shall each document the results of these Reliability Assessments and corrective plans and shall annually provide these to its respective NERC Regional Reliability Organization(s), as required by the Regional Reliability Organization.	LOWER
TPL-004-0	R1.	The Planning Authority and Transmission Planner shall each demonstrate through a valid assessment that its portion of the interconnected transmission system is evaluated for the risks and consequences of a number of each of the extreme contingencies that are listed under Category D of Table I. To be valid, the Planning Authority's and Transmission Planner's assessment shall:	MEDIUM
TPL-004-0	R1.1.	Be made annually.	MEDIUM
TPL-004-0	R1.2.	Be conducted for near-term (years one through five).	MEDIUM
TPL-004-0	R1.3.	Be supported by a current or past study and/or system simulation testing that addresses each of the following categories, showing system performance following Category D contingencies of Table I. The specific elements selected (from within each of the following categories) for inclusion in these studies and simulations shall be acceptable to the associated Regional Reliability Organization(s).	MEDIUM
TPL-004-0	R1.3.1.	Be performed and evaluated only for those Category D contingencies that would produce the more severe system results or impacts. The rationale for the contingencies selected for evaluation shall be available as supporting information. An explanation of why the remaining simulations would produce less severe system results shall be available as supporting information.	MEDIUM
TPL-004-0	R1.3.2.	Cover critical system conditions and study years as deemed appropriate by the responsible entity.	MEDIUM
TPL-004-0	R1.3.3.	Be conducted annually unless changes to system conditions do not warrant such analyses.	MEDIUM
TPL-004-0	R1.3.4.	Have all projected firm transfers modeled.	MEDIUM
TPL-004-0	R1.3.5.	Include existing and planned facilities.	MEDIUM
TPL-004-0	R1.3.6.	Include Reactive Power resources to ensure that adequate reactive resources are available to meet system performance.	MEDIUM
TPL-004-0	R1.3.7.	Include the effects of existing and planned protection systems, including any backup or redundant systems.	MEDIUM

<b>Standard Number</b>	<b>Requirement Number</b>	<b>Requirement</b>	<b>Violation Risk Factor</b>
TPL-004-0	R1.3.8.	Include the effects of existing and planned control devices.	MEDIUM
TPL-004-0	R1.3.9.	Include the planned (including maintenance) outage of any bulk electric equipment (including protection systems or their components) at those demand levels for which planned (including maintenance) outages are performed.	MEDIUM
TPL-004-0	R1.4.	Consider all contingencies applicable to Category D.	MEDIUM
TPL-004-0	R2.	The Planning Authority and Transmission Planner shall each document the results of its reliability assessments and shall annually provide the results to its entities' respective NERC Regional Reliability Organization(s), as required by the Regional Reliability Organization.	LOWER
TPL-005-0	R1.4.	Inter-Regional reliability assessments to demonstrate that the performance of these systems is in compliance with NERC Reliability Standards TPL-001-0, TPL-002-0, TPL-003-0, TPL-004-0 and respective Regional transmission and generation criteria. These assessments shall also identify key reliability issues and the risks and uncertainties affecting Adequacy and Security.	MEDIUM
TPL-005-0	R3.5.	Reliability impacts of new or proposed environmental rules and regulations.	MEDIUM
TPL-005-0	R3.6.	Reliability impacts of new or proposed legislation that affects, has affected, or has the potential to affect the Adequacy of the interconnected Bulk Electric Systems in North America.	MEDIUM
TPL-005-0	R1.	Each Regional Reliability Organization shall annually conduct reliability assessments of its respective existing and planned Regional Bulk Electric System (generation and transmission facilities) for:	MEDIUM
TPL-005-0	R1.1.	Current year:	MEDIUM
TPL-005-0	R1.1.1.	Winter.	MEDIUM
TPL-005-0	R1.1.2.	Summer.	MEDIUM
TPL-005-0	R1.1.3.	Other system conditions as deemed appropriate by the Regional Reliability Organization.	MEDIUM
TPL-005-0	R1.2.	Near-term planning horizons (years one through five). Detailed assessments shall be conducted.	MEDIUM
TPL-005-0	R1.3.	Longer-term planning horizons (years six through ten). Assessment shall focus on the analysis of trends in resources and transmission Adequacy, other industry trends and developments, and reliability concerns.	MEDIUM
TPL-005-0	R2.	The Regional Reliability Organization shall provide its Regional and Inter-Regional seasonal, near-term, and longer-term reliability assessments to NERC on an annual basis.	LOWER
TPL-005-0	R3.	The Regional Reliability Organization shall perform special reliability assessments as requested by NERC or the NERC Board of Trustees under their specific directions and criteria. Such assessments may include, but are not limited to:	MEDIUM
TPL-005-0	R3.1.	Security assessments.	MEDIUM
TPL-005-0	R3.2.	Operational assessments.	MEDIUM
TPL-005-0	R3.3.	Evaluations of emergency response preparedness.	MEDIUM
TPL-005-0	R3.4.	Adequacy of fuel supply and hydro conditions.	MEDIUM

Standard Number	Requirement Number	Requirement	Violation Risk Factor
TPL-006-0	R1.	Each Regional Reliability Organization shall provide, as requested (seasonally, annually, or as otherwise specified) by NERC, system data, including past, existing, and future facility and Bulk Electric System data, reports, and system performance information, necessary to assess reliability and compliance with the NERC Reliability Standards and the respective Regional planning criteria. The facility and Bulk Electric System data, reports, and system performance information shall include, but not be limited to, one or more of the following types of information as outlined below:	MEDIUM
TPL-006-0	R1.1.	Electric Demand and Net Energy for Load (actual and projected demands and Net Energy for Load, forecast methodologies, forecast assumptions and uncertainties, and treatment of Demand-Side Management.)	MEDIUM
TPL-006-0	R1.2.	Resource Adequacy and supporting information (Regional assessment reports, existing and planned resource data, resource availability and characteristics, and fuel types and requirements.)	MEDIUM
TPL-006-0	R1.3.	Demand-Side resources and their characteristics (program ratings, effects on annual system loads and load shapes, contractual arrangements, and program durations.)	MEDIUM
TPL-006-0	R1.4.	Supply-side resources and their characteristics (existing and planned generator units, Ratings, performance characteristics, fuel types and availability, and real and reactive capabilities.)	MEDIUM
TPL-006-0	R1.5.	Transmission system and supporting information (thermal, voltage, and Stability Limits, contingency analyses, system restoration, system modeling and data requirements, and protection systems.)	MEDIUM
TPL-006-0	R1.6.	System operations and supporting information (extreme weather impacts, Interchange Transactions, and Congestion impacts on the reliability of the interconnected Bulk Electric Systems.)	MEDIUM
TPL-006-0	R1.7.	Environmental and regulatory issues and impacts (air and water quality issues, and impacts of existing, new, and proposed regulations and legislation.)	MEDIUM