

**Compliance Questionnaire and**

**Reliability Standard Audit Worksheet**

**TPL-001-0.1 — System Performance Under Normal (No Contingency) Conditions (Category A)**

**Registered Entity:** *(Must be completed by the Compliance Enforcement Authority)*

**NCR Number:** *(Must be completed by the Compliance Enforcement Authority)*

**Applicable Function(s): PA, TP**

**Auditors:**

**Disclaimer**

NERC developed this Reliability Standard Audit Worksheet (RSAW) language in order to facilitate NERC’s and the Regional Entities’ assessment of a registered entity’s compliance with this Reliability Standard. The NERC RSAW language is written to specific versions of each NERC Reliability Standard. Entities using this RSAW should choose the version of the RSAW applicable to the Reliability Standard being assessed. While the information included in this RSAW provides some of the methodology that NERC has elected to use to assess compliance with the requirements of the Reliability Standard, this document should not be treated as a substitute for the Reliability Standard or viewed as additional Reliability Standard requirements. In all cases, the Regional Entity should rely on the language contained in the Reliability Standard itself, and not on the language contained in this RSAW, to determine compliance with the Reliability Standard. NERC’s Reliability Standards can be found on NERC’s website at <http://www.nerc.com/page.php?cid=2|20>. Additionally, NERC Reliability Standards are updated frequently, and this RSAW may not necessarily be updated with the same frequency. Therefore, it is imperative that entities treat this RSAW as a reference document only, and not as a substitute or replacement for the Reliability Standard. It is the responsibility of the registered entity to verify its compliance with the latest approved version of the Reliability Standards, by the applicable governmental authority, relevant to its registration status.

The NERC RSAW language contained within this document provides a non‑exclusive list, for informational purposes only, of examples of the types of evidence a registered entity may produce or may be asked to produce to demonstrate compliance with the Reliability Standard. A registered entity’s adherence to the examples contained within this RSAW does not necessarily constitute compliance with the applicable Reliability Standard, and NERC and the Regional Entity using this RSAW reserves the right to request additional evidence from the registered entity that is not included in this RSAW. Additionally, this RSAW includes excerpts from FERC Orders and other regulatory references. The FERC Order cites are provided for ease of reference only, and this document does not necessarily include all applicable Order provisions. In the event of a discrepancy between FERC Orders, and the language included in this document, FERC Orders shall prevail.

# Subject Matter Experts

Identify your company’s subject matter expert(s) responsible for this Reliability Standard. Include the person's title, organization and the requirement(s) for which they are responsible. Insert additional lines if necessary.

**Response: *(Registered Entity Response Required)***

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| --- | --- | --- | --- |
| **SME Name** | **Title** | **Organization** | **Requirement** |
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# Reliability Standard Language

**TPL-001-0.1 — System Performance Under Normal (No Contingency) Conditions (Category A)**

**Purpose:**

System simulations and associated assessments are needed periodically to ensure that reliable systems are developed that meet specified performance requirements with sufficient lead time, and continue to be modified or upgraded as necessary to meet present and future system needs.

**Applicability:**

Planning Authority

Transmission Planner

**NERC BOT Approval Date: 10/29/2008**

**FERC Approval Date: 5/13/2009**

**Reliability Standard Enforcement Date in the United States: 5/13/2009**

**Requirements**:

1. 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:
   1. Be made annually.
   2. Be conducted for near-term (years one through five) and longer-term (years six through ten) planning horizons.
   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).
      1. Cover critical system conditions and study years as deemed appropriate by the entity performing the study.
      2. Be conducted annually unless changes to system conditions do not warrant such analyses.
      3. Be conducted beyond the five-year horizon only as needed to address identified marginal conditions that may have longer lead-time solutions.
      4. Have established normal (pre-contingency) operating procedures in place.
      5. Have all projected firm transfers modeled.
      6. Be performed for selected demand levels over the range of forecast system demands.
      7. Demonstrate that system performance meets Table 1 for Category A (no contingencies).
      8. Include existing and planned facilities.
      9. Include Reactive Power resources to ensure that adequate reactive resources are available to meet system performance.
   4. Address any planned upgrades needed to meet the performance requirements of Category A.

**Describe, in narrative form, how you meet compliance with this requirement: *(Registered Entity Response Required)***

# R1 Supporting Evidence and Documentation

**Response: *(Registered Entity Response Required)***

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|  | **Provide the following:**  **Document Title and/or File Name, Page & Section, Date & Version** | | |
| **Title** | | **Date** | **Version** | |
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| *Audit Team: Additional Evidence Reviewed:* | |  |  | |
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***This section must be completed by the Compliance Enforcement Authority.***

**Compliance Assessment Approach Specific to TPL-001-0.1 R1.**

**Note: Requirements R1.1, R1.2, R1.3 and R1.4 refer to the Assessment.**

**Note: Requirements R1.3.1 thru R1.3.9 refer to the studies referenced in R1.3.**

\_\_\_\_\_\_ Determine if entity has completed an Assessment that studies if its portion of the interconnected transmission system is planned to meet the requirements of R1.

\_\_\_\_\_\_ Confirm that the above Assessment is conducted annually.

\_\_\_\_\_\_ Confirm that the Assessment is both for the:

\_\_\_\_\_\_1-5 year planning horizon range

\_\_\_\_\_\_6-10 year planning horizon range

\_\_\_\_\_\_ Confirm that the Assessment is supported by one or more current Study(ies) or past Studies and/or system simulations testing that address(es) the following categories showing system performance following Category A of Table 1 (no contingencies).

\_\_\_\_\_\_ Cover critical system conditions and study years as deemed appropriate by the entity performing the study.

\_\_\_\_\_\_ Be conducted annually unless changes to system conditions do not warrant such analyses.

\_\_\_\_\_\_ Be conducted beyond the five-year horizon only as needed to address identified marginal conditions that may have longer lead-time solutions.

\_\_\_\_\_\_ Have established normal (pre-contingency) operating procedures in place.

\_\_\_\_\_\_ Have all projected firm transfers modeled.

\_\_\_\_\_\_ Be performed for selected demand levels over the range of forecast system demands.

\_\_\_\_\_\_ Demonstrate that system performance meets Table I for Category A (no contingencies).

\_\_\_\_\_\_ Include existing and planned facilities.

\_\_\_\_\_\_ Include Reactive Power resources to ensure that adequate reactive resources are available to meet system performance.

\_\_\_\_\_\_ Confirm that the Assessment addressed planned upgrades needed to meet the performance requirements of Category A.

**Detailed notes:**

1. 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:
   1. Provide a written summary of its plans to achieve the required system performance as described above throughout the planning horizon.
      1. Including a schedule for implementation.
      2. Including a discussion of expected required in-service dates of facilities.
      3. Consider lead times necessary to implement plans.
   2. Review, in subsequent annual assessments, (where sufficient lead time exists), the continuing need for identified system facilities. Detailed implementation plans are not needed.

**Describe, in narrative form, how you meet compliance with this requirement: *(Registered Entity Response Required)***

**Question**: Have your planning assessments ever indicated an inability of the systems to respond as prescribed in Requirement 1 of this standard? If yes, please describe the actions taken.

**Entity** **Response: *(Registered Entity Response Required)***

# R2 Supporting Evidence and Documentation

**Response: *(Registered Entity Response Required)***

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| **Title** | | **Date** | **Version** | |
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| *Audit Team: Additional Evidence Reviewed:* | |  |  | |
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***This section must be completed by the Compliance Enforcement Authority.***

**Compliance Assessment Approach Specific to TLP-001-0.1 R2.**

\_\_\_\_\_\_ Determine if system simulations indicate an inability of the system to respond as prescribed in Reliability Standard TPL-001-0 Requirement 1.

\_\_\_\_\_\_ Determine if a written summary of plans to achieve the required system performance has been provided.

\_\_\_\_\_\_ Determine if the above summary includes:

\_\_\_\_\_\_ A schedule for implementation.

\_\_\_\_\_\_ A discussion of expected required in-service dates of facilities.

\_\_\_\_\_\_ Consideration of the lead times necessary to implement the plans.

\_\_\_\_\_\_ Determine if the current assessment has reviewed the continuing need for previously identified system facilities.

**Detailed notes:**

1. 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.

**Describe, in narrative form, how you meet compliance with this requirement: *(Registered Entity Response Required)***

# R3 Supporting Evidence and Documentation

**Response: *(Registered Entity Response Required)***

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|  | **Provide the following:**  **Document Title and/or File Name, Page & Section, Date & Version** | | |
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| *Audit Team: Additional Evidence Reviewed:* | |  |  | |
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***This section must be completed by the Compliance Enforcement Authority.***

**Compliance Assessment Approach Specific to TLP‑001‑0.1 R3.**

\_\_\_\_\_\_ Determine if entity has documented the results of its Reliability Assessments and Corrective Plans per TPL-001-0 Requirement 3.

\_\_\_\_\_\_ Determine if documentation has been submitted to the entity’s Regional Reliability Organization/Regional Entity per the Regional Reliability Organization’s/Regional Entity’s submission requirements.

**E**

**Detailed notes:**

# Supplemental Information

**Other ‑** The list of questions above is not all inclusive of evidence required to show compliance with the Reliability Standard. Provide additional information here**, as necessary that** demonstrates compliance with this Reliability Standard.

**Entity** **Response: *(Registered Entity Response)***

# Compliance Findings Summary (to be filled out by auditor)

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| **Req.** | **C** | **PV** | **OEA** | **NA** | **Statement** |
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**Excerpts from FERC Orders -- For Reference Purposes Only**

**Updated Through September 1, 2010**

**TPL-001-0.1**

**Order 693**

**March 16, 2007**

P1683. The Transmission Planning (TPL) group of Reliability Standards consists of six Reliability Standards that are applicable to transmission planners, planning authorities and regional reliability organizations. These Reliability Standards are intended to ensure that the transmission system is planned and designed to meet an appropriate and specific set of reliability criteria. Transmission planning is a process that involves a number of stages including developing a model of the Bulk-Power System, using this model to assess the performance of the system for a range of operating conditions and contingencies, determining those operating conditions and contingencies that have an undesirable reliability impact, identifying the nature of potential options, and the need to develop and evaluate a range of solutions and selecting the preferred solution, taking into account the time needed to place the solution in service. The proposed TPL Reliability Standards address: (1) the types of simulations and assessments that must be performed to ensure that reliable systems are developed to meet present and future system needs and (2) the information required to assess regional compliance with planning criteria and for self-assessment of regional reliability.

P1684. The TPL group of Reliability Standards contains a table designated “Table 1” (Transmission System Standards – Normal and Emergency Conditions), which is a key part of this group of Reliability Standards. It lays out the system performance requirements for a range of contingencies grouped according to the number of elements forced out of service as a result of the contingency. For example: Category A applies to the normal system with no contingencies; Category B applies to contingencies resulting in the loss of a single element, defined as a generator, transmission circuit, transformer, single DC pole with or without a fault; Category C applies to a contingency resulting in loss of two or more elements, such as any two circuits on a multiple circuit tower line or both poles of a bi-polar DC line; while Category D applies to extreme contingencies resulting in loss of multiple elements, such as a substation or all lines on a right-of-way. The system performance expectations for Category C contingencies are lower than those for Category B contingencies, in that they allow unspecified amounts of planned or controlled loss of load.

P1757. Reliability Standard TPL-001-0 deals with planning related to system performance under normal conditions, i.e., a situation where no system contingency or no unexpected failure or outage of a system component has occurred.The Reliability Standard seeks to ensure that the Bulk-Power System is planned to meet the system performance requirements under these normal conditions by requiring the transmission planner and the planning authority to evaluate their transmission system annually and document the ability of that system to meet the performance requirements established in the Reliability Standard under conditions where no system contingencies are present.Meeting these requirements means two things. First, when all system facilities are in service and normal operating procedures are in effect, the system 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. Secondly, the system remains stable and within the applicable ratings for thermal and voltage limits, no loss of demand or curtailed firm transfers occurs, and no cascading outages occur. TPL-001-0 applies both to near-term and longer-term planning horizons.

P1758. The Requirements of TPL-001-0 specify that the planning authority and transmission planner must demonstrate through a valid assessment that the Reliability Standard’s system performance requirements can be met. The assessment must be supported by a current or past study and/or system simulation testing that addresses various categories of conditions to be simulated as set forth in the Reliability Standard to verify system performance under normal conditions. When system simulations indicate that the system cannot meet the performance requirements set forth in the Reliability Standard, a documented plan to achieve system performance requirements must be prepared. The specific study elements selected from each of the categories for assessments are subject to approval by the associated regional reliability organization.

P1764. The Commission approves TPL-001-0 as a mandatory and enforceable Reliability Standard...

P1765. In assessing system conditions, Requirement R1.3.1 of TPL-001-0 requires entities to cover “critical system conditions and study years,” as deemed appropriate by the entity performing the study…

P1766. Requirement R1.3 of TPL-001-0 states that the planning authority and transmission planner must provide studies and simulations to support its planning assessments, and that the specific elements selected for the study shall be acceptable to the associated regional reliability organization. Given that neighboring systems may be adversely affected, our goal is to ensure that they are involved in the determination and review of system assessments to permit an early opportunity to provide input and coordinate plans…

P1768. … The Commission notes that Reliability Standards TPL-002-0 through TPL-004-0 include consideration of planned outages, as initial system conditions, at load levels for conditions under which they are performed. Because these Reliability Standards, and not TPL-001-0, will govern the adequacy of the Bulk-Power System under planned outage conditions, the Commission will not adopt the NOPR proposal to require consideration of planned outages at load levels for conditions under which they are performed for Reliability Standard TPL-001-0….

P1770. Accordingly, the Commission approves Reliability Standard TPL-001-0 as

mandatory and enforceable…

**Order No. 890**

**February 16, 2007**

P471. The Commission adopts the NOPR’s proposal and will require transmission providers to disclose to all customers and other stakeholders the basic criteria, assumptions, and data that underlie their transmission system plans. In addition, transmission providers will be required to reduce to writing and make available the basic methodology, criteria, and processes they use to develop their transmission plans, including how they treat retail native loads, in order to ensure that standards are consistently applied. This information should enable customers, other stakeholders, or an independent third party to replicate the results of planning studies and thereby reduce the incidence of after-the-fact disputes regarding whether planning has been conducted in an unduly discriminatory fashion. We note, however, that transmission providers cannot be expected to fulfill these planning obligations unless non-public utility transmission providers that participate in the planning process make similar information available and, for the reasons set forth above, we fully expect that they will do so. We believe that the same safeguards developed as discussed above regarding the openness principle, such as confidentiality agreements and password protected access to information, will adequately protect against inappropriate disclosure of confidential information or CEII.

**Revision History**

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| --- | --- | --- | --- |
| **Version** | **Date** | **Reviewers** | **Revision Description** |
| 1 | May 5 2010 | Craig Struck | Added Revision History. Modified compliance assessment approach for R1 & R3. |
| 2 | July 2010 | RSAW Working Group | Effective dates and version # change. |
| 2 | September 2010 | NERC Legal & NERC Compliance | Added regulatory language & reviewed for formatting consistency. |
| 2 | December 2010 | QRSAW WG | Revised Findings Table, modified Supporting Evidence tables, and added Revision History |
| 2 | January 2011 | Craig Struck | Reviewed for format consistency and content. |
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