

# DRAFT Reliability Standard Audit Worksheet<sup>1</sup>

# TPL-001-5 - Transmission System Planning Performance Requirements

This section to be completed by the Compliance Enforcement Authority.

Audit ID: Audit ID if available; or REG-NCRnnnnn-YYYYMMDD

**Registered Entity:** Registered name of entity being audited

NCR Number: NCRnnnnn

Compliance Enforcement Authority: Region or NERC performing audit
Compliance Assessment Date(s)<sup>2</sup>: Month DD, YYYY, to Month DD, YYYY

Compliance Monitoring Method: [On-site Audit | Off-site Audit | Spot Check]

Names of Auditors: Supplied by CEA

# **Applicability of Requirements**

	ВА	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	RSG	то	TOP	TP	TSP
R1							Х							Х	
R2							Х							Х	
R3							Х							Х	
R4							Х							Х	
R5							Х							Х	
R6							Х							Х	
R7							Х								
R8							Х							Х	

### Legend:

Text with blue background:	Fixed text – do not edit			
Text entry area with Green background:	Entity-supplied information			
Text entry area with white background:	Auditor-supplied information			

<sup>&</sup>lt;sup>1</sup> 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. 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.

<sup>&</sup>lt;sup>2</sup> Compliance Assessment Date(s): The date(s) the actual compliance assessment (on-site audit, off-site spot check, etc.) occurs.

# **Findings**

(This section to be completed by the Compliance Enforcement Authority)

Req. Finding		Summary and Documentation	<b>Functions Monitored</b>
R1			
R2			
R3			
R4			
R5			
R6			
R7			
R8			

Req.	Areas of Concern

Req.	Recommendations							

Req.	Positive Observations						

# **Subject Matter Experts**

Identify the Subject Matter Expert(s) responsible for this Reliability Standard.

Registered Entity Response (Required; Insert additional rows if needed):

SME Name	Title	Organization	Requirement(s)	

### R1 Supporting Evidence and Documentation

- R1. Each Transmission Planner and Planning Coordinator shall maintain System models within its respective area for performing the studies needed to complete its Planning Assessment. The models shall use data consistent with that provided in accordance with the MOD-032 standard, supplemented by other sources as needed, including items represented in the Corrective Action Plan, and shall represent projected System conditions. This establishes Category P0 as the normal System condition in Table 1.
  - **1.1.** System models shall represent:
    - **1.1.1.** Existing Facilities.
    - 1.1.2. Known outage(s) of generation or Transmission Facility(ies) scheduled in the Near-Term Transmission Planning Horizon selected for analyses pursuant to Requirement R2, Parts-2.1.3 and 2.4.3 only. Known outage(s) shall be selected according to an established procedure or technical rationale that, at a minimum:
      - 1.1.2.1. Includes known outage(s) that are expected to result in Non-Consequential Load-Loss for P1 events in Table 1 when concurrent with the selected known outage(s); and
      - **1.1.2.2.** Does not exclude known outage(s) solely based upon the outage duration.
    - 1.1.3.1.1.2. New planned Facilities and changes to existing Facilities.
    - **1.1.4.1.1.3.** Real and reactive Load forecasts.
    - **1.1.5.1.1.4.** Known commitments for Firm Transmission Service and Interchange.
    - 1.1.6.1.1.5. Resources (supply or demand side) required for Load.
- M1. Each Transmission Planner and Planning Coordinator shall provide evidence, in electronic or hard copy format, that it is maintaining System models within their its respective area, using data consistent with MOD-032 including items represented in the Corrective Action Plan, representing projected System conditions, and that the models represent the required information in accordance with Requirement R1.

### Registered Entity Response (Required):

**Question:** Did entity select any known outage(s) of generation or Transmission Facility(ies) in consultation with the Reliability Coordinator for the Near-Term Planning Horizon for analyses pursuant to Requirement R2, parts 2.1.3 and 2.4.3? □Yes □No

If yes, provide evidence the models included these outages(s). If no, explain how the entity made this determination. [Note: A separate spreadsheet or other document may be used. If so, provide the document reference below.]

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

### **Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

# Evidence Requested: i+

Provide the following evidence, or other evidence to demonstrate compliance.

Provide a list of Corrective Action Plans that were active or identified in the monitoring period.

Provide a description of any other supplementary sources excluding MOD-032 and Corrective Action Plans.

# **Registered Entity Evidence (Required):**

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):								

# Compliance Assessment Approach Specific to TPL-001-5, R1

This section to be completed by the Compliance Enforcement Authority

TIIIS	his section to be completed by the compliance Enjoicement Authority							
	(Part 1.1) Confirm the Entity's System models represent:							
	(Part 1.1.1) Existing Facilities.							
	(Part 1.1.2) Known outage(s) of generation or Transmission Facility(ies) scheduled in the Near Term-							
	Transmission Planning Horizon selected for analyses pursuant to Requirement R2, Parts 2.1.3 and 2.4.3							
	only							
	(Part 1.1.2.1) Confirm known outage(s) were selected according to an established procedure or-							
	technical rationale that includes known outage(s) that are expected to result in Non-Consequential							
	Load Loss for P1 events in Table 1 when concurrent with the selected known outage(s).							
	(Part 1.1.2.2) Confirm known outage(s) were selected according to an established procedure or							
	technical rationale that includes does not exclude known outage(s) solely based upon the outage-							
	duration.							
	(Part 1.1.23) New planned Facilities and changes to existing Facilities.							
	(Part 1.1.34) Real and reactive Load forecasts.							
	(Part 1.1.45) Known commitments for Firm Transmission Service and Interchange.							
	(Part 1.1.56) Resources (supply or demand side) required for Load.							
No	ote to Auditor:							

### **Auditor Notes:**

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# **R2 Supporting Evidence and Documentation**

- **R2.** Each Transmission Planner and Planning Coordinator shall prepare an annual Planning Assessment of its portion of the BES. This Planning Assessment shall use current or qualified past studies (as indicated in Requirement R2, Part 2.6), document assumptions, and document summarized results of the steady state analyses, short circuit analyses, and Stability analyses.
- **M2.** Each Transmission Planner and Planning Coordinator shall provide dated evidence, such as electronic or hard copies of its annual Planning Assessment, that it has prepared an annual Planning Assessment of its portion of the BES in accordance with Requirement R2.

# Registered Entity Response (Required):

# **Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

# Evidence Requested: i+

Provide the following evidence, or other evidence to demonstrate compliance.

Current and prior three steady state, short circuit and Stability Planning Assessments.

# Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

### Compliance Assessment Approach Specific to TPL-001-5, R2

This section to be completed by the Compliance Enforcement Authority

Confirm the entity's annual Planning Assessment <u>uses</u> :				
Used cCurrent or qualified past studies				
Documented Assumptions				
Documented summary of results of the:				
<ul> <li>Steady state analyses</li> </ul>				

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Audit ID: Audit ID if available; or NCRnnnnn-YYYYMMDD

	0	Short circuit analyses	
	0	Stability analyses	
No	te to Auditor:		
Aud	itor Notes:		



# R2 Part 2.1 Supporting Evidence and Documentation

- **2.1.** For the Planning Assessment, the Near-Term Transmission Planning Horizon portion of the steady state analysis shall be assessed annually and be supported by current annual studies or qualified past studies as indicated in Requirement R2, Part 2.6. Qualifying studies need to include the following conditions:
  - **2.1.1.** System peak Load for either Year One or year two, and for year five.
  - **2.1.2.** System Off-Peak Load for one of the five years.
  - 2.1.3. P1 events in Table 1 expected to produce more severe System impacts on its portion of the BES, with known outages modeled as in Requirement R1, Part 1.1.2, under those Systempeak or Off-Peak conditions when known outages are scheduled.
  - **2.1.4.2.1.3.** For each of the studies described in Requirement R2, Parts 2.1.1 and 2.1.2, sensitivity case(s) shall be utilized to demonstrate the impact of changes to the basic assumptions used in the model. To accomplish this, the sensitivity analysis in the Planning Assessment must vary one or more of the following conditions by a sufficient amount to stress the System within a range of credible conditions that demonstrate a measurable change in System response:
    - Real and reactive forecasted Load.
    - Expected transfers.
    - Expected in service dates of new or modified Transmission Facilities.
    - Reactive resource capability.
    - Generation additions, retirements, or other dispatch scenarios.
    - Controllable Loads and Demand Side Management.
    - Duration or timing of known Transmission outages.
  - 2.1.4. When known outage(s) of generation or Transmission Facility(ies) are planned in the Near-Term Planning Horizon, the impact of selected known outages on System performance shall be assessed. These known outage(s) shall be selected for assessment consistent with a documented outage coordination procedure or technical rationale by the Planning Coordinator or Transmission Planner. Known outage(s) shall not be excluded solely based upon outage duration. The assessment shall be performed for the PO and P1 categories identified in Table 1 with the System peak or Off-Peak conditions that the System is expected to experience when the known outage(s) are planned. This assessment shall include, at a minimum known outages expected to produce more severe System impacts on the Planning coordinator or Transmission Planners's portion of the BES. Past or current studies may support the selection of known outage(s), if the study(s) has comparable post-Contingency System conditions and configuration such as those following P3 or P6 category events in Table 1.
  - 2.1.5. When an entity's spare equipment strategy could result in the unavailability of major Transmission equipment that has a lead time of one year or more (such as a transformer), the impact of this possible unavailability on System performance shall be assessed. The analysis shall be performed for the PO, P1, and P2 categories identified in Table 1 with the conditions that the System is expected to experience during the possible unavailability of the long lead time equipment.

Registered Entity Response (Required): Question: (R2 Part 2.1.5) Could entity spare equipment strategy result in the unavailability of major Transmission equipment that has a lead time of one year or more?  Yes No If yes, provide details. If no, explain how the entity made this determination. [Note: A separate spreadsheet or other document may be used. If so, provide the document reference below.]  Registered Entity Response (Required): Compliance Narrative:								
Registered Entity Response (Required): Compliance Narrative: Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.								
Evidence Requested: Provide the following of Description of spare equations		idence to d	emonstrate o	compliance.				
_	tion is requested for and bookmarked, as				ce. Also, evidence submitted cation where evidence of			
Compliance may be found.  Revision   Relevant   Page(s)								
File Name	Document Title							
		Version	Date	Section(s)	of Document			
File Name  Audit Team Evidence Re		Version	Date	Section(s)	of Document			
Audit Team Evidence Re Compliance Assessment This section to be completed.	eviewed (This section of the compliance of the c	to be completed by the complete by the complet	Date  eted by the Co  , R2 Part 2.1  ment Authori	section(s)  mpliance Enfo	of Document  orcement Authority):			
Compliance Assessment This section to be comple  (Part 2.1) Confirm to supported by curre	t Approach Specific to leted by the Compliant the Entity Planning As nt annual studies or cateady state analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an annual studies or cateady state analysis with the Entity Planning As an analysis with the Enti	to be completed by the complete complet	, R2 Part 2.1 ment Author or Near-Term st studies.	section(s)  mpliance Enfo	of Document			

	(Part 2.1.2) System Off-Peak Load for one of the five years.
	(Part 2.1.3) P1 events in Table 1 expected to produce more severe System impacts on its portion of the
	BES modeled under those System peak or Off-Peak conditions, when known outages are scheduled.
	(Part 2.1.34) Confirm the Planning Assessment included sensitivity case(s) analysis that varied one or more
	of the following conditions by a sufficient amount to stress the System within a range of credible
	conditions that demonstrate a measurable change in System response:
	Real and reactive forecasted load.
	Expected transfers.
	<ul> <li>Expected in service dates of new or modified Transmission Faculties.</li> </ul>
	Reactive resource capability.
	<ul> <li>Generation additions, retirements, or other dispatch scenarios.</li> </ul>
	Controllable Loads and Demand Side Management.
	Duration or timing of known Transmission outages.
	(Part 2.1.4) Confirm that when known outage(s) of generation or Transmission Facility(ies) are planned in
	the Near-Term Planning Horizon, the impact of selected known outages on System performance was
	assessed.
	(Part 2.1.4) Confirm known outage(s) were selected for assessment consistent with a documented outage
	coordination procedure or technical rationale by the Planning Coordinator or Transmission Planner.
	(Part 2.1.4) Confirm that the assessment was performed for the P0 and P1 categories identified in Table 1
	with the System peak or Off-Peak conditions that the System is expected to experience when the known
	outage(s) are planned.
	(Part 2.1.4) Confirm the assessment included, at a minimum known outages expected to produce more
	severe System impacts on the Planning Coordinator or Transmission Planners's Planner's portion of the
	BES.
	(Part 2.1.4) Confirm that if past or current studies are used to support the selection of known outage(s),
	the study(ies) has comparable post-Contingency System conditions and configuration such as those
	following P3 or P6 category events in Table 1.
	(Part 2.1.5) Review Entity response to question above regarding spare equipment strategy.
	(Part 2.1.5) If the entity's spare equipment strategy could result in a lead time of one year or more, confirm
	analysis was performed for P0, P1, and P2 categories with conditions expected during this long lead time.
No	ote to Auditor:
Auc	litor Notes:

# R2 Part 2.2 Supporting Evidence and Documentation

- **2.2.** For the Planning Assessment, the Long-Term Transmission Planning Horizon portion of the steady state analysis shall be assessed annually and be supported by the following annual current study, supplemented with qualified past studies as indicated in Requirement R2, Part 2.6:
  - **2.2.1.** A current study assessing expected System peak Load conditions for one of the years in the Long-Term Transmission Planning Horizon and the rationale for why that year was selected.

# Registered Entity Response (Required):

# **Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

# Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed	(This section to be	completed by the	Compliance Enforcement Autho	rity):

# Compliance Assessment Approach Specific to TPL-001-5, R2.2

This section to be completed by the Compliance Enforcement Authority

(Part 2.2) Confirm the entity's long-term transmission planning portion of their its steady state assessment is supported by current annual studies supplemented by qualified past studies.

(Part 2.2.1) Confirm steady state analysis includes System Peak load condition for at least one of the years in the Long-Term Transmission Planning Horizon.

(Part 2.2.1) Confirm the registered entity provided a rationale for why the year(s) studied was selected.

**Note to Auditor:** 

Auditor Notes:

# R2 Part 2.3 Supporting Evidence and Documentation

2.3. The short circuit analysis portion of the Planning Assessment shall be conducted annually addressing the Near-Term Transmission Planning Horizon and can be supported by current or past studies as qualified in Requirement R2, Part 2.6. The analysis shall be used to determine whether circuit breakers have interrupting capability for Faults that they will be expected to interrupt using the System short circuit model with any planned generation and Transmission Facilities in service which could impact the study area.

# Registered Entity Response (Required):

### **Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

# Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

ļ	Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):							
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# Compliance Assessment Approach Specific to TPL-001-5, R2 Part 2.3

This section to be completed by the Compliance Enforcement Authority

- (Part 2.3) Confirm the entity's short circuit analysis portion of their-its Planning Assessment addressing the Near-Term Transmission Planning Horizon was conducted annually.

  (Part 2.3) Confirm short circuit analysis determines if circuit breakers have interrupting capability for Faults
  - that they will be expected to interrupt.
  - (Part 2.3) Confirm the registered entity used a System short circuit model with any planned generation and Transmission Facility in service which could impact the study area in the short circuit analysis.

### **Note to Auditor:**

Auditor Notes:

# R2 Part 2.4 Supporting Evidence and Documentation

- **2.4.** For the Planning Assessment, the Near-Term Transmission Planning Horizon portion of the Stability analysis shall be assessed annually and be supported by current or past studies as qualified in Requirement R2, Part2.6. The following studies are required:
  - **2.4.1.** System peak Load for one of the five years. System peak Load levels shall include a Load model which represents the expected dynamic behavior of Loads that could impact the study area, considering the behavior of induction motor Loads. An aggregate System Load model which represents the overall dynamic behavior of the Load is acceptable.
  - **2.4.2.** System Off-Peak Load for one of the five years.
  - **2.4.3.** P1 events in Table 1 expected to produce more severe System impacts on its portion of the BES, with known outages modeled as in Requirement R1, Part 1.1.2, under those System peak or Off Peak conditions when known outages are scheduled.
  - **2.4.4.2.4.3.** For each of the studies described in Requirement R2, Parts 2.4.1 and 2.4.2, sensitivity case(s) shall be utilized to demonstrate the impact of changes to the basic assumptions used in the model. To accomplish this, the sensitivity analysis in the Planning Assessment must vary one or more of the following conditions by a sufficient amount to stress the System within a range of credible conditions that demonstrate a measurable change in performance:
    - Load level, Load forecast, or dynamic Load model assumptions.
    - Expected transfers.
    - Expected in service dates of new or modified Transmission Facilities.
    - Reactive resource capability.
    - Generation additions, retirements, or other dispatch scenarios.
  - 2.4.4. When known outage(s) of generation or Transmission Facility(ies) are planned in the Near-Term Planning Horizon, the impact of selected known outages on System performance shall be assessed. These known outage(s) shall be selected for assessment consistent with a documented outage coordination procedure or technical rationale by the Planning Coordinator or Transmission Planner. Known outage(s) shall not be excluded solely based upon outage duration. The assessment shall be performed for the P1 categories identified in Table 1 with the System peak or Off-Peak conditions that the System is expected to experience when the known outage(s) are planned. This assessment shall include, at a minimum, those known outages expected to produce more severe System impacts on the Planning Coordinator or Transmission Planner's portion of the BES. Past or current studies may support the selection of known outage(s), if the study(s) has comparable post-Contingency System conditions and configuration such as those following P3 or P6 category events in Table 1.
    - **2.4.5.** When an entity's spare equipment strategy could result in the unavailability of major Transmission equipment that has a lead time of one year or more (such as a transformer), the impact of this possible unavailability on System performance shall be assessed. Based upon this assessment, an analysis shall be performed for the selected P1 and P2 category events identified in Table 1 for which the unavailability is expected to produce more severe System impacts on its portion of the BES. The analysis shall simulate the conditions that the

System is expected to experience during the possible unavailability of the long lead time equipment.

# Registered Entity Response (Required):

# **Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

# Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Review	ved (This sec	ction to be comp	pleted by the Co	mpliance Enforcement	Authority):

### Compliance Assessment Approach Specific to TPL-001-5, R2.4

This section to be completed by the Compliance Enforcement Authority

- (Part 2.4) Confirm the annual Planning Assessment for the Near-Term Planning Horizon portion of the Stability analysis is supported by a current or qualified past study.
  - (Part 2.4.1) Confirm the Stability analysis was performed for the System peak Load for at least one of the five years. The Load model should represent the expected dynamic behavior of the Load.
  - (Part 2.4.2) Confirm the Stability analysis Entity Planning Assessment was performed for the System Off-Peak Load for at least one of the five years.

(Part 2.4.3) Confirm the Stability analysis Entity Planning Assessment was performed for the P1 events in Table 1 expected to produce more severe System impacts on its portion of the BES, with known outages modeled as in Requirement R1, Part 1.1.2, under those System peak or Off-Peak conditions when known outages are scheduled.

(Part 2.4.<u>3</u>4) Confirm the Planning Assessment utilized sensitivity cases that varied one or more of the following conditions by a sufficient amount to stress the System within a range of credible conditions that demonstrate a measurable change in performance:

- Load level, Load forecast, or dynamic Load model assumptions.
- Expected transfers.

- Expected in service dates of new or modified Transmission Facilities.
- Reactive resource capability.
- Generation additions, retirements, or other dispatch scenarios.

# (Part 2.4.4)

(Part 2.4.4) Confirm that when known outage(s) of generation or Transmission Facility(ies) are planned in the Near-Term Planning Horizon, the impact of selected known outages on System performance was assessed.

(Part 2.4.4) Confirm known outage(s) were selected for assessment consistent with a documented outage coordination procedure or technical rationale by the Planning Coordinator or Transmission Planner

(Part 2.4.4) Confirm that the assessment was performed for the P0 and P1 categories identified in Table 1 with the System peak or Off-Peak conditions that the System is expected to experience when the known outage(s) are planned

(Part 2.4.4) Confirm the assessment included, at a minimum known outages expected to produce more severe System impacts on the Planning Coordinator or Transmission Planners's Planner's portion of the BES

(Part 2.4.4) Confirm that if past or current studies are used to support the selection of known outage(s), the study(s) has comparable post-Contingency System conditions and configuration such as those following P3 or P6 category events in Table 1.

(Part 2.4.5) Confirm the Stability analysis Entity Planning Assessment was performed for, when an entity's spare equipment strategy could result in the unavailability of major Transmission equipment that has a lead time of one year or more (such as a transformer), the impact of this possible unavailability on System performance shall be assessed. Based upon this assessment, an analysis shall be performed for the selected P1 and P2 category events identified in Table 1 for which the unavailability is expected to produce more severe System impacts on its portion of the BES. The analysis shall simulate the conditions that the System is expected to experience during the possible unavailability of the long lead time equipment.

Note to Auditor: The Planning Assessment shall be conducted at least once per calendar year.

Auditor Notes:	

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nΖ	part 2.3	JUDDUI LIIIE	EVIUELICE	anu Du	unientation

**2.5.** For the Planning Assessment, the Long-Term Transmission Planning Horizon portion of the Stability analysis shall be assessed to address the impact of proposed material generation additions or changes in that timeframe and be supported by current or past studies as qualified in Requirement R2, Part2.6 and shall include documentation to support the technical rationale for determining material changes.

	-				
Registered Entity Respo Question: Did you identify compliance monitoring per If yes, provide a list of prop	y any proposed materiariod? $\square$ Yes $\ \square$ No				t timeframe during the entity made this determination.
Registered Entity Respo Compliance Narrative: Provide a brief explanation evidence, including links to	n, in your own words, o	•		Requirement	References to supplied
Registered Entity Evider	nce (Required):				
_	and bookmarked, as				ce. Also, evidence submitted cation where evidence of
File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document
Audit Team Evidence Re	vious d'This soction		stad by the Ca	mulianas Fuf	announced Authority).
Audit ream Evidence Re	viewed (This section)	to be comple	ted by the Co	mphance Enio	orcement Authority):
Compliance Assessment  This section to be complete.			-	ity	

(Part 2.5) Confirm the Long-Term Transmission Planning Horizon portion of the Entity Planning Assessment addressed the impact of proposed material generation additions or changes in that timeframe is supported by current or qualified studies.

(Part 2.5) Confirm the Long-Term Transmission Planning Horizon portion of the Entity Planning Assessment documented the supporting technical rationale for determining material changes.

Note to Auditor:	
Auditor Notes:	

# **R2 Part 2.6 Supporting Evidence and Documentation**

- **2.6.** Past studies may be used to support the Planning Assessment if they meet the following requirements:
  - **2.6.1.** For steady state, short circuit, or Stability analysis: the study shall be five calendar years old or less, unless a technical rationale can be provided to demonstrate that the results of an older study are still valid.
  - **2.6.2.** For steady state, short circuit, or Stability analysis: no material changes have occurred to the System represented in the study. Documentation to support the technical rationale for determining material changes shall be included.

Registered Entity Respo	nse (Required):				
<b>Question:</b> Did entity choose to use R2.6 to comply with any R2 requirements during the compliance monitoring period?  \[ \sum \text{Yes}  \text{No} \]					
If yes, provide the sub-requentity made this determination		tilized R2.6 to	support the P	Planning Asses	ssment. If no, explain how the
Registered Entity Respo Compliance Narrative: Provide a brief explanation evidence, including links to	ı, in your own words, o	•		Requirement	References to supplied
Registered Entity Evider	nce (Required):				
_	and bookmarked, as				ce. Also, evidence submitted cation where evidence of
		Revision or	Document	Relevant Page(s) or	Description of Applicability
File Name	Document Title	Version	Date	Section(s)	of Document
Audit Team Evidence Re	wiewed (This section	to be comple	stad by the Co	mpliance Enfe	orcament Authority):
Addit Team Evidence Ne	viewed (This section)	to be comple	teu by the co	inpliance Line	orcement Authority).

Compliance Assessment Approach Specific to TPL-001-5, R2 Part 2.6

This section to be completed by the Compliance Enforcement Authority

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Audit ID: Audit ID if available; or NCRnnnnn-YYYYMMDD

	If past studies are used to support the Planning Assessment, Econfirm the studies used to support the
	Planning Assessment for steady state, short circuit, or Stability analysis meets the following
	requirements:
	(Part 2.6.1) Was performed within five calendar years or have a technical rationale why an older
	study is still valid.
	(Part 2.6.2) Confirm nNo material changes have occurred to the System represented in the study.
	(Part 2.6.2) Confirm telechnical rationale for determining material changes is documented.
No	ote to Auditor:

# Auditor Notes:



# R2 Part 2.7 Supporting Evidence and Documentation

- 2.7. For planning events shown in Table 1, when the analysis indicates an inability of the System to meet the performance requirements in Table 1, the Planning Assessment shall include Corrective Action Plan(s) addressing how the performance requirements will be met. Revisions to the Corrective Action Plan(s) are allowed in subsequent Planning Assessments but the planned System shall continue to meet the performance requirements in Table 1. Corrective Action Plan(s) do not need to be developed solely to meet the performance requirements for a single sensitivity case analyzed in accordance with Requirements R2, Parts 2.1.34 and 2.4.3. The Corrective Action Plan(s) shall:
  - **2.7.1.** List System deficiencies and the associated actions needed to achieve required System performance. Examples of such actions include:
    - Installation, modification, retirement, or removal of Transmission and generation Facilities and any associated equipment.
    - Installation, modification, or removal of Protection Systems or Remedial Action Scheme.
    - Installation or modification of automatic generation tripping as a response to a single or multiple Contingency to mitigate Stability performance violations.
    - Installation or modification of manual and automatic generation runback/tripping as a response to a single or multiple Contingency to mitigate steady state performance violations.
    - Use of Operating Procedures specifying how long they will be needed as part of the Corrective Action Plan.
    - Use of rate applications, DSM, new technologies, or other initiatives.
  - **2.7.2.** Include actions to resolve performance deficiencies identified in multiple sensitivity studies or provide a rationale for why actions were not necessary.
  - 2.7.3. If situations arise that are beyond the control of the Transmission Planner or Planning Coordinator that prevent the implementation of a Corrective Action Plan in the required timeframe, then the Transmission Planner or Planning Coordinator is permitted to utilize Non-Consequential Load Loss and curtailment of Firm Transmission Service to correct the situation that would normally not be permitted in Table 1, provided that the Transmission Planner or Planning Coordinator documents that they are taking actions to resolve the situation. The Transmission Planner or Planning Coordinator shall document the situation causing the problem, alternatives evaluated, and the use of Non-Consequential Load Loss or curtailment of Firm Transmission Service.
  - **2.7.4.** Be reviewed in subsequent annual Planning Assessments for continued validity and implementation status of identified System Facilities and Operating Procedures.

Registered Entity Response (Required)	ed):	Requi	/ Response	Entity	tered	Regis
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1108.010.01 = 11111/ 1100pointo (110quintou).
Question: Did entity's Planning Assessments identify any inability of the System to meet the performance requirements
in Table 1 during the compliance monitoring period?
□ Yes □ No
If yes, provide evidence of compliance as listed below. If no, explain how the entity made this determination.

# Registered Entity Response (Required):

# **Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

# Evidence Requested: i+

Provide the following evidence, or other evidence to demonstrate compliance.

Provide a list of the identified inabilities of the system to meet the performance requirements of Table 1 and the associated Corrective Action Plan(s).

# Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Auth	ority):
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# Compliance Assessment Approach Specific to TPL-001-5, R2 Part 2.7

This section to be completed by the Compliance Enforcement Authority

11113 3	ection to be completed by the compliance Enjorcement Authority
	(Part 2.7) Confirm whether the Entity Planning Assessment did or did not identify any inability of the
	System to meet the performance requirements in Table 1.
	For listed deficiencies:
	(Part 2.7.1) Confirm the entity identified appropriate actions needed to achieve required System
	performance in the Corrective Action Plan.
	(Part 2.7.2) Confirm entity provided an adequate rationale for why a Corrective Action Plan was not
	necessary.
	(Part 2.7.3) If the entity identified a situation that arose beyond their control that prevented the
	implementation of a Corrective Action Plan, confirm the entity documented the situation causing the
	problem, the alternatives evaluated, and the use of Non-Consequential Load Loss or curtailment of
	Firm Transmission Service.
	(Part 2.7.3) If an entity utilized Non-Consequential Load Loss and curtailment of Firm Transmission
	Service to correct the situation that would normally not be permitted in Table 1, verify they provided

documents that they are taking actions to resolve the situation.

(Part 2.7.4) Confirm the entity validated that prior Corrective Action Plans are still relevant to current planning period and implementation status of identified System Facilities and Operating Procedures are addressed.

**Note to Auditor:** Entitiles shall not be required to comply with Requirement R2, Part 2.7 for the Table 1 Category P5 -planning event for the non-redundant components of a Protection System identified in footnote 13- items 2, 3, and 4 until 24 months after the effective date of Reliability Standard TPL-001-5.

Regarding Part 2.7.3 - For 84 calendar months beginning the first day of the first calendar quarter following applicable regulatory approval, or in those jurisdictions where regulatory approval is not required on the first day of the first calendar quarter 84 months after Board of Trustees adoption or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities, Corrective Action Plans applying to the following categories of Contingencies and events identified in TPL-001-5, Table 1 are allowed to include Non-Consequential Load Loss and curtailment of Firm Transmission Service (in accordance with Requirement R2, Part 2.7.3.) that would not otherwise be permitted by the requirements of TPL-001-5:

- P1-2 (for controlled interruption of electric supply to local network customers connected to or supplied by the Faulted element)
- P1-3 (for controlled interruption of electric supply to local network customers connected to or supplied by the Faulted element)
- P2-1
- P2-2 (above 300 kV)
- P2-3 (above 300 kV)
- P3-1 through P3-5
- P4-1 through P4-5 (above 300 kV)
- P5 (above 300 kV)

These exceptions to Table 1 are applicable through January 1, 2021.

Auditor Notes:		

# R2 Part 2.8 Supporting Evidence and Documentation

- **2.8.** For short circuit analysis, if the short circuit current interrupting duty on circuit breakers determined in Requirement R2, Part 2.3 exceeds their Equipment Rating, the Planning Assessment shall include a Corrective Action Plan to address the Equipment Rating violations. The Corrective Action Plan shall:
  - **2.8.1.** List System deficiencies and the associated actions needed to achieve required System performance.
  - **2.8.2.** Be reviewed in subsequent annual Planning Assessments for continued validity and implementation status of identified System Facilities and Operating Procedures.

Not required as should be addressed in R2 and R2 part 2.3 evidence and evidence requested below. Registered Entity Response (Required):

# **Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

# Evidence Requested: i+

Provide the following evidence, or other evidence to demonstrate compliance.

List of circuit breakers identified and associated Corrective Action Plans.

# Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

				Relevant	
		Revision		Page(s)	
		or	Document	or	Description of Applicability
File Name	Document Title	Version	Date	Section(s)	of Document

Audit Team Evidence Reviewed	(This section to be completed by the Compliance Enforcement Authority):

# Compliance Assessment Approach Specific to TPL-001-5, R2 Part 2.8

This section to be completed by the Compliance Enforcement Authority

(Part 2.8) If the entity identified short circuit current interrupting duty on circuit breakers determined in Requirement R2, Part 2.3 that exceeds their Equipment Rating during the monitoring period:

(Part 2.8.1) Confirm the entity's Corrective Action Plan listed System deficiencies and the associated actions needed to achieve required System performance.

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Audit ID: Audit ID if available; or NCRnnnnn-YYYYMMDD

	(Part 2.8.2) Confirm the entity's Corrective Action Plan was reviewed in subsequent annual Planning
	Assessments for continued validity and implementation status of identified System Facilities and
	Operating Procedures.
No	te to Auditor:
Aud	itor Notes:

# **R3 Supporting Evidence and Documentation**

- **R3.** For the steady state portion of the Planning Assessment, each Transmission Planner and Planning Coordinator shall perform studies for the Near-Term and Long-Term Transmission Planning Horizons in Requirement R2, Parts 2.1, and 2.2. The studies shall be based on computer simulation models using data provided in Requirement R1.
  - **3.1.** Studies shall be performed for planning events to determine whether the BES meets the performance requirements in Table 1 based on the Contingency list created in Requirement R3, Part 3.4.
  - **3.2.** Studies shall be performed to assess the impact of the extreme events which are identified by the list created in Requirement R3, Part 3.5. If the analysis concludes there is Cascading caused by the occurrence of extreme events, an evaluation of possible actions designed to reduce the likelihood or mitigate the consequences and adverse impacts of the event(s) shall be conducted.
  - **3.3.** Contingency analyses for Requirement R3, Parts 3.1 & 3.2 shall:
    - **3.3.1.** Simulate the removal of all elements that the Protection System and other automatic controls are expected to disconnect for each Contingency without operator intervention. The analyses shall include the impact of subsequent:
      - **3.3.1.1.** Tripping of generators where simulations show generator bus voltages or high side of the generation step up (GSU) voltages are less than known or assumed minimum generator steady state or ride through voltage limitations. Include in the assessment any assumptions made.
      - **3.3.1.2.** Tripping of Transmission elements where relay loadability limits are exceeded.
    - **3.3.2.** Simulate the expected automatic operation of existing and planned devices designed to provide steady state control of electrical system quantities when such devices impact the study area. These devices may include equipment such as phase-shifting transformers, load tap changing transformers, and switched capacitors and inductors.
  - 3.4. Those planning events in Table 1, that are expected to produce more severe System impacts on its portion of the BES, shall be identified and a list of those Contingencies to be evaluated for System performance in Requirement R3, Part 3.1 created. The rationale for those Contingencies selected for evaluation shall be available as supporting information.
    - **3.4.1.** The Planning Coordinator and Transmission Planner shall coordinate with adjacent Planning Coordinators and Transmission Planners to ensure that Contingencies on adjacent Systems which may impact their Systems are included in the Contingency list.
  - 3.5. Those extreme events in Table 1 that are expected to produce more severe System impacts shall be identified and a list created of those events to be evaluated in Requirement R3, Part 3.2. The rationale for those Contingencies selected for evaluation shall be available as supporting information. If the analysis concludes there is Cascading caused by the occurrence of extreme events, an evaluation of possible actions designed to reduce the likelihood or mitigate the consequences and adverse impacts of the event(s) shall be conducted.
- **M3.** Each Transmission Planner and Planning Coordinator shall provide dated evidence, such as electronic or hard copies of the studies utilized in preparing the Planning Assessment, in accordance with Requirement R3.

# Registered Entity Response (Required):

# **Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

# Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

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				Relevant	
		Revision		Page(s)	
		or	Document	or	Description of Applicability
File Name	Document Title	Version	Date	Section(s)	of Document
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	File Name	File Name Document Title	or	or Document	Revision Page(s) or Document or

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):				
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Com	npliance Assessment Approach Specific to TPL-001-5, R3
This	section to be completed by the Compliance Enforcement Authority
	(R3) Confirm entity performed steady state studies based on computer simulation for the Near-Term and
	Long-Term Transmission Planning Horizons to determine whether the BES meets system performance.
	(Part 3.1) Confirm studies assess if BES meets the performance requirements in Table 1.
	(Part 3.2) Confirm the entity assessed the impact of extreme events expected to produce the more severe
	System impacts.
	(Part 3.3.1) Confirm the entity simulated the removal of all elements that the Protection System and other
	automatic controls are expected to disconnect for each Contingency without operator intervention. The
	analyses shall include the impact of subsequent:
	(Part 3.3.1.1) Tripping of generators where simulations show voltages are less than generators steady
	state or ride through voltage limitations, including any assumptions made.
	(Part 3.3.1.2) Tripping of Transmission elements when relay loadability limits are exceeded.
	(Part 3.3.2) Confirm the entity simulated the expected automatic operation of existing and planned devices
	designed to provide steady state control of electrical system quantities when such devices impact the study
	area.
	(Part 3.4) Confirm entity identified, listed, and evaluated the events in Table 1 expected to produce the
	more severe System impacts on its portion of the BES and the rationale used for selecting these

Contingencies.

	(Part 3.4.1) Confirm entity coordinated with adjacent Planning Coordinators and Transmission Planners to
	ensure that Contingencies on adjacent Systems which may impact their System are included in their
	Contingency list.
	(Part 3.5) Confirm entity identified, listed, and evaluated the extreme events in Table 1 and the rationale for
	those Contingencies selected for evaluation.
	(Part 3.5) If the analysis concludes cascading is caused by an extreme event, then confirm the entity
	evaluation of actions designed to reduce the likelihood or mitigate the consequences of such event(s).
N	ote to Auditor:
Au	ditor Notes:



### R4 Supporting Evidence and Documentation

- **R4.** For the Stability portion of the Planning Assessment, as described in Requirement R2, Parts 2.4 and 2.5, each Transmission Planner and Planning Coordinator shall perform the Contingency analyses listed in Table 1. The studies shall be based on computer simulation models using data provided in Requirement R1.
  - **4.1.** Studies shall be performed for planning events to determine whether the BES meets the performance requirements in Table 1 based on the Contingency list created in Requirement R4, Part 4.4.
    - **4.1.1.** For planning event P1: No generating unit shall pull out of synchronism. A generator being disconnected from the System by fault clearing action or by a Remedial Action Scheme is not considered pulling out of synchronism.
    - **4.1.2.** For planning events P2 through P7: When a generator pulls out of synchronism in the simulations, the resulting apparent impedance swings shall not result in the tripping of any Transmission system elements other than the generating unit and its directly connected Facilities.
    - **4.1.3.** For planning events P1 through P7: Power oscillations shall exhibit acceptable damping as established by the Planning Coordinator and Transmission Planner.
  - **4.2.** Studies shall be performed to assess the impact of the extreme events which are identified by the list created in Requirement R4, Part 4.5. If the analysis concludes there is Cascading caused by the occurrence of extreme events, an evaluation of possible actions designed to reduce the likelihood or mitigate the consequences of the event (s) shall be conducted.
  - **4.3.** Contingency analyses for Requirement R4, Parts 4.1 and 4.2 shall:
    - **4.3.1.** Simulate the removal of all elements that the Protection System and other automatic controls are expected to disconnect for each Contingency without operator intervention. The analyses shall include the impact of subsequent:
      - **4.3.1.1.** Successful high speed (less than one second) reclosing and unsuccessful high speed reclosing into a Fault where high speed reclosing is utilized.
      - **4.3.1.2.** Tripping of generators where simulations show generator bus voltages or high side of the GSU voltages are less than known or assumed generator low voltage ride through capability. Include in the assessment any assumptions made.
      - **4.3.1.3.** Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models.
    - **4.3.2.** Simulate the expected automatic operation of existing and planned devices designed to provide dynamic control of electrical system quantities when such devices impact the study area. These devices may include equipment such as generation exciter control and power system stabilizers, static var compensators, power flow controllers, and DC Transmission controllers.
  - **4.4.** Those planning events in Table 1 that are expected to produce more severe System impacts on its portion of the BES, shall be identified, and a list created of those Contingencies to be evaluated in Requirement R4, Part 4.1. The rationale for those Contingencies selected for evaluation shall be available as supporting information.

- **4.4.1.** Each Planning Coordinator and Transmission Planner shall coordinate with adjacent Planning Coordinators and Transmission Planners to ensure that Contingencies on adjacent Systems which may impact their Systems are included in the Contingency list.
- **4.5.** Those extreme events in Table 1 that are expected to produce more severe System impacts shall be identified and a list created of those events to be evaluated in Requirement R4, Part 4.2. The rationale for those Contingencies selected for evaluation shall be available as supporting information.
- **M4.** Each Transmission Planner and Planning Coordinator shall provide dated evidence, such as electronic or hard copies of the studies utilized in preparing the Planning Assessment in accordance with Requirement R4.

# Registered Entity Response (Required):

# **Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

# Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

<u>Audi</u>	t Team Evidence	Reviewed (This s	ection to be o	ompleted by the Compliance En	forcement Authority):	
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# Compliance Assessment Approach Specific to TPL-001-5, R4

This section to be completed by the Compliance Enforcement Authority

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(R4) Confirm entity performed Stability studies based on computer simulation for the Near-Term and Long-
Term Transmission Planning Horizons to determine whether the BES meets system performance.
(Part 4.1) Confirm Contingencies studied test whether the BES meets Stability performance requirements
in Table 1.
(Part 4.1.1) Confirm generating units did not pull out of synchronism for P1 events.
(Part 4.1.2) Confirm Transmission system elements do not trip by a generating unit being pulled out of
synchronism for a P2 through P7 event

	(Part 4.1.3) Confirm for planning events P1 through P7: Power oscillations shall exhibit acceptable damp as established by the Planning Coordinator and Transmission Planner.
	(Part 4.2) Confirm studies were performed to assess the impact of the extreme events which are identify the list created in Requirement R4, Part 4.5.
	(Part 4.2) Confirm that if the analysis concludes there is Cascading caused by the occurrence of extreme events, an evaluation of possible actions designed to reduce the likelihood or mitigate the consequence the event(s) was conducted.
	(Part 4.3.1) Confirm the Contingency analysis was simulated with the removal of all elements that the Protection System and other automatic controls are expected to disconnect for each Contingency witho operator intervention. Contingency analysis shall include the impact of subsequent:
	(Part 4.3.1.1) Successful high speed (less than one second) reclosing and unsuccessful high speed reclosi into a Fault where high speed reclosing is utilized.
	(Part 4.3.1.2) Tripping of generators where simulations show generator bus voltages or high side of the GSU voltages are less than known or assumed generator low voltage ride through capability.
	(Part 4.3.1.3) Tripping of Transmission lines and transformers where transient swings cause Protection System operation based on generic or actual relay models.
	(Part 4.3.2) Confirm the studies simulated expected operation of existing and planned devices were designed to provide dynamic control.
	(Part 4.4) Confirm the entity identified, listed, and evaluated the events in Table 1 expected to produce to more severe System impacts on its portion of the BES and the rationale used for selecting these Contingencies.
	(Part 4.4.1) Confirm the entity coordinated with adjacent Planning Coordinators and Transmission Plann to ensure that Contingencies on adjacent Systems which may impact their System are included in the entity's Contingency list.
	(Part 4.5) Confirm the entity identified, listed, and evaluated the most severe events in Table 1.
	(Part 4.5) Confirm the entity documented the rationale for the Contingencies studied.
ì	te to Auditor:

Auditor Notes:				

# **R5 Supporting Evidence and Documentation**

- **R5.** Each Transmission Planner and Planning Coordinator shall have criteria for acceptable System steady state voltage limits, post-Contingency voltage deviations, and the transient voltage response for its System. For transient voltage response, the criteria shall at a minimum, specify a low voltage level and a maximum length of time that transient voltages may remain below that level.
- **M5.** Each Transmission Planner and Planning Coordinator shall provide dated evidence such as electronic or hard copies of the documentation specifying the criteria for acceptable System steady state voltage limits, post-Contingency voltage deviations, and the transient voltage response for its System in accordance with Requirement R5.

# Registered Entity Response (Required):

# **Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

# Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):					

### Compliance Assessment Approach Specific to TPL-001-5, R5

This section to be completed by the Compliance Enforcement Authority

 his section to be completed by the compliance Enjoycement Authority					
(R5) Confirm the entity has criteria for:					
System steady state voltage limits					
Post-Contingency voltage deviations					
Transient voltage response including at least:					
o Low voltage level					
Maximum length of time the transient voltage may remain low voltage level					

Note to Auditor:	
Auditor Notes:	
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# R6 Supporting Evidence and Documentation

- **R6.** Each Transmission Planner and Planning Coordinator shall define and document, within their Planning Assessment, the criteria or methodology used in the analysis to identify System instability for conditions such as Cascading, voltage instability, or uncontrolled islanding.
- **M6.** Each Transmission Planner and Planning Coordinator shall provide dated evidence, such as electronic or hard copies of documentation specifying the criteria or methodology used in the analysis to identify System instability for conditions such as Cascading, voltage instability, or uncontrolled islanding that was utilized in preparing the Planning Assessment in accordance with Requirement R6.

# Registered Entity Response (Required):

# **Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

# **Registered Entity Evidence (Required):**

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):					
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# Compliance Assessment Approach Specific to TPL-001-5, R6

This section to be completed by the Compliance Enforcement Authority

(R6) Confirm the entity defined and documented, within their its Planning Assessment, the criteria or methodology used in the analysis to identify System instability for conditions such as Cascading, voltage instability, or uncontrolled islanding.

**Note to Auditor:** 

uditor Notes:

### R7 Supporting Evidence and Documentation

- **R7.** Each Planning Coordinator, in conjunction with each of its Transmission Planners, shall determine and identify each entity's individual and joint responsibilities for performing the required studies for the Planning Assessment.
- **M7.** Each Planning Coordinator, in conjunction with each of its Transmission Planners, shall provide dated documentation on roles and responsibilities, such as meeting minutes, agreements, and e-mail correspondence that identifies that agreement has been reached on individual and joint responsibilities for performing the required studies and Assessments in accordance with Requirement R7.

# Registered Entity Response (Required):

# **Compliance Narrative:**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

# Evidence Requested: i+

Provide the following evidence, or other evidence to demonstrate compliance.

A list of entities with responsibilities for performing the required studies for the Planning Assessment.

# Registered Entity Evidence (Required):

The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

<b>Audit Team Evidence</b>	ce Reviewed (Th	is section to be completed by the Compliance Enforcement Authority):

### Compliance Assessment Approach Specific to TPL-001-5, R7

This section to be completed by the Compliance Enforcement Authority

(R7) Confirm the entity, in conjunction with each of its Transmission Planners, identified individual and joint responsibility for performing the required studies for the Planning Assessment.

**Note to Auditor:** 

Auditor Notes:

# **R8 Supporting Evidence and Documentation**

- **R8.** Each Planning Coordinator and Transmission Planner shall distribute its Planning Assessment results to adjacent Planning Coordinators and adjacent Transmission Planners within 90 calendar days of completing its Planning Assessment, and to any functional entity that has a reliability related need and submits a written request for the information within 30 days of such a request.
  - **8.1.** If a recipient of the Planning Assessment results provides documented comments on the results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to that recipient within 90 calendar days of receipt of those comments.
- M8. Each Planning Coordinator and Transmission Planner shall provide evidence, such as email notices, documentation of updated web pages, postal receipts showing recipient and date; or a demonstration of a public posting, that it has distributed its Planning Assessment results to adjacent Planning Coordinators and adjacent Transmission Planners within 90 days of having completed its Planning Assessment, and to any functional entity who has indicated a reliability need within 30 days of a written request and that the Planning Coordinator or Transmission Planner has provided a documented response to comments received on Planning Assessment results within 90 calendar days of receipt of those comments in accordance with Requirement R8.

Registered Entity Response (Required):  Question: (R8) Did entity receive a written request from a functional entity that has a reliability related need?  ☐ Yes ☐ No
If yes, provide evidence that assessment was provided within 30 days. If no, explain how the entity made this determination.
[Note: A separate spreadsheet or other document may be used. If so, provide the document reference below.]
Desistant Statistic Personne (Personne)
Registered Entity Response (Required):  Question: (Part8.1) Did a recipient of the Planning Assessment results provide documented comments on the results?  ☐ Yes ☐ No
If yes, provide the response to the comments. If no, explain how the entity made this determination. [Note: A separate spreadsheet or other document may be used. If so, provide the document reference below.]
Registered Entity Response (Required):

DRAFT NERC Reliability Standard Audit Worksheet

**Compliance Narrative:** 

Audit ID: Audit ID if available; or NCRnnnnn-YYYYMMDD

evidence, including links to the appropriate page, are recommended.

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied

Regi	stered Entity Evider	nce (Required):							
	The following information is requested for each document submitted as evidence. Also, evidence submitted								
sh	should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of								
CO	compliance may be found.								
	File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document			
Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):									
Compliance Assessment Approach Specific to TPL-001-5, R8  This section to be completed by the Compliance Enforcement Authority									
	(R8) Confirm the entity distributed its Planning Assessment results to adjacent Planning Coordinators and								
	adjacent Transmission Planners, within 90 days of completing its assessment.								
	(R8) Confirm the entity distributed its Planning Assessment results to functional entities that have a								
	reliability related need within 30 days of a request.								
	(Part 8.1) Confirm the entity provided a documented response to comments on Planning Assessment								
	results within 90 calendar days.								
No	te to Auditor:								
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			>						

# Additional Information:

# **Reliability Standard**

In addition to the Reliability Standard, there is an applicable Implementation Plan available on the NERC Website.

In addition to the Reliability Standard, there is background information available on the NERC Website.

Capitalized terms in the Reliability Standard refer to terms in the NERC Glossary, which may be found on the NERC Website.

### Sampling Methodology

Sampling is essential for auditing compliance with NERC Reliability Standards since it is not always possible or practical to test 100% of either the equipment, documentation, or both, associated with the full suite of enforceable standards. The Sampling Methodology Guidelines and Criteria (see NERC website), or sample guidelines, provided by the Electric Reliability Organization help to establish a minimum sample set for monitoring and enforcement uses in audits of NERC Reliability Standards.

Regulatory Language [Developer to ensure RSAW has been provided to NERC Legal for links to appropriate Regulatory Language – See example below]

# **Revision History for RSAW**

Version	Date	Reviewers	Revision Description
1	<u>9</u> 10/1 <u>5</u> 0/201 <u>8</u> 7	RSAW Task Force, Compliance Assurance	New Document

<sup>&</sup>lt;sup>1</sup> Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.

