

**Exhibit B**  
Implementation Plan

# Implementation Plan

## Project 2015-10 Single Points of Failure Reliability Standard TPL-001-5

### Applicable Standard(s)

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

### Requested Retirement(s)

- TPL-001-4 – Transmission System Planning Performance Requirements

### Prerequisite Standard(s)

None

### Applicable Entities

- Planning Coordinator
- Transmission Planner

### Background

Reliability Standard TPL-001-5 revises the prior version of the TPL-001 standard in three key respects:

- To address reliability issues concerning the study of single points of failure in Protection Systems, as identified in:
  - Federal Energy Regulatory Commission (FERC) Order No. 754, issued on September 15, 2011; and
  - the report dated September 2015 by two subcommittees under NERC Planning Committee, the System Protection and Control Subcommittee and System Analysis and Modeling Subcommittee, titled *Assessment of Protection System Single Points of Failure Based on the Section 1600 Data Request*;
- To address directives from FERC Order No. 786 (October 17, 2013) approving Reliability Standard TPL-001-4, relating to:
  - modeling known outages with a duration of less than six months (paragraph 40); and
  - adding stability analysis for the outage of major Transmission equipment with a lead time of one year or more (paragraph 89); and;
- To replace references to the Reliability Standards MOD-010 and MOD-012, which have been superseded by MOD-032.

## General Considerations

The standard will become effective 36 months following regulatory approval. The 36-month period provides time for Planning Coordinators and Transmission Planners to develop, among other things:

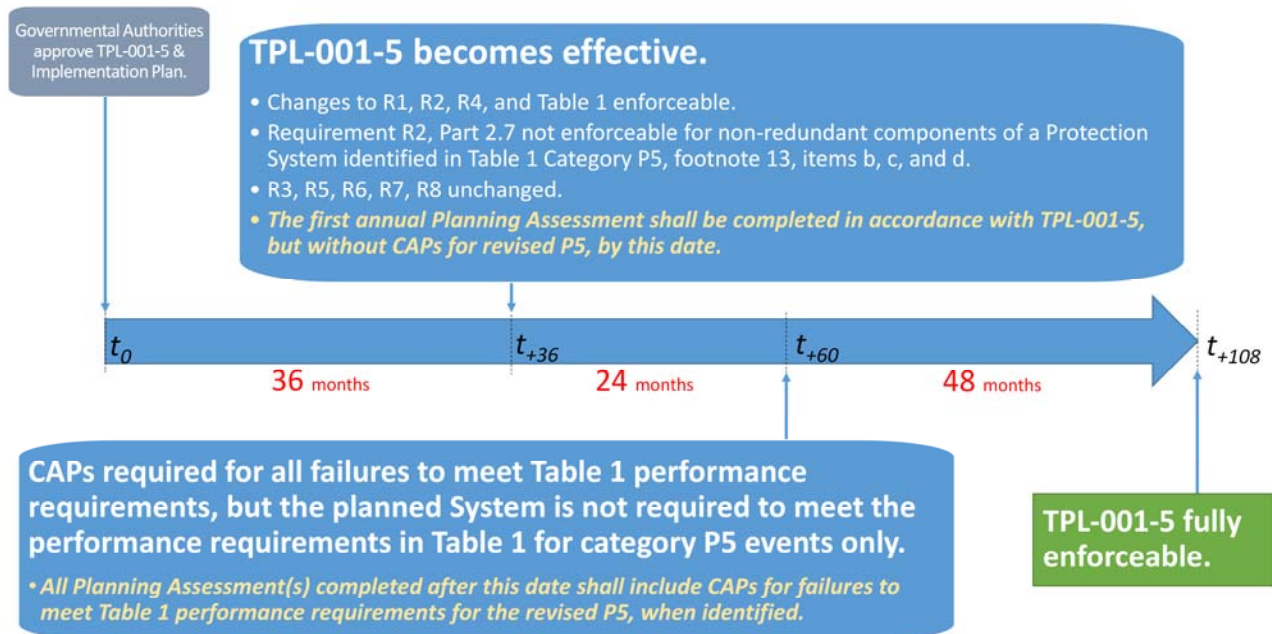
- A procedure or technical rationale for selecting known outages of generation and Transmission Facilities;
- Coordination with protection engineers to obtain the necessary data to perform the single points of failure analysis required by the standard; and
- Additional analysis required due to changes in the standard.

Following this 36 month period, an additional 24-month period allows time for the development of Corrective Action Plans (CAPs) under TPL-001-5 for Category P5 planning events involving single points of failure in Protection Systems.

Transmission Planners and Planning Coordinators shall have an additional 48 months beyond the time by which CAPs must be developed to comply with the bolded part of Requirement R2, Part 2.7 that states: “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**” for P5 planning events for non-redundant components of a Protection System identified in footnote 13 items a, b, c, and d.

This implementation plan reflects consideration that Planning Coordinators and Transmission Planners will need time to conduct the new studies and analyses in order to coordinate with asset owners and protection engineers to identify appropriate CAP actions and establish the associated timetables for completion. This includes any necessary CAP(s) to address System performance issues for studies involving Table 1 Category P5 (Fault plus non-redundant component of a Protection System failure to operate) required by TPL-001-5 Requirement R2, Part 2.7 for the non-redundant components of a Protection System identified in TPL-001-5 Table 1 Footnote 13.

Please see Figure 1 Implementation Timeline below for an illustration of the 108-month implementation timeline in those jurisdictions where governmental approval is required.



**Figure 1 Implementation Plan Timeline**

**Effective Date**

**TPL-001-5 – Transmission System Planning Performance Requirements**

Where approval by an applicable governmental authority is required, the standard shall become effective on the first day of the first calendar quarter that is 36 months after the effective date of the applicable governmental authority’s order approving the standard, or as otherwise provided by the applicable governmental authority.

Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is 36 months after the date the standard is adopted by the NERC Board of Trustees, or as otherwise provided for in that jurisdiction.

**Compliance Date for TPL-001-5 Requirement 2, Part 2.7 associated with Table 1 Category P5 Footnote 13 items a, b, c, and d**

Entities 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 a, b, c, and d until 24 months after the effective date of Reliability Standard TPL-001-5.

For CAPs developed to address failures to meet Table 1 performance requirements for the P5 planning event for the non-redundant components of a Protection System identified in footnote 13 items a, b, c, and d, entities shall not be required to comply until 72 months after the effective date of Reliability Standard TPL-001-5 with the bolded part of Requirement R2, Part 2.7 that states: **“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.”**

## **Initial Performance of Periodic Requirements**

Each responsible entity shall complete the first annual Planning Assessment in accordance with TPL-001-5 (without CAP(s) for the revised P5 planning event) by the effective date of the standard.

Each responsible entity shall develop any required CAP(s) under Requirement R2, Part 2.7 associated with the non-redundant components of a Protection System identified in Table 1 Category P5 Footnote 13 items a, b, c, and d by 24 months after the effective date of the standard.

## **Retirement Date**

### **TPL-001-4 – Transmission System Planning Performance Requirements**

Reliability Standard TPL-001-4 shall be retired immediately prior to the effective date of TPL-001-5 in the particular jurisdiction in which the revised standard is becoming effective.