

# Compliance Application Notice — 0020

TPL-002, TPL-003, TPL-004 and TOP-002 Equipment Outages

Posted: December 15, 2011

## Primary Interest Groups

Compliance Enforcement Authority (CEA)<sup>1</sup>

NERC

Regional Entity

Registered Entities subject to TPL-002, TPL-003, TPL-004 and TOP-002

## Issue: What outages should be addressed under the TPL standards versus under the TOP standards?

For the purpose of aiding a CEA, this CAN provides instruction for assessing whether outages, including outages of Protection Systems, must be included in transmission planning assessments under TPL-002, TPL-003, and TPL-004 or in operational planning studies under TOP-002.<sup>2</sup>

## Summary of Compliance Application Notice

A CEA is to verify that planned transmission system outages, including planned outages of Protection Systems, were included in TPL assessments. An outage is “planned” when it is included on an approved Transmission Operator (TOP) or Balancing Authority (BA) outage schedule. Therefore, a CEA is to verify that any outages that were included on the approved, applicable TOP or BA outage schedule more than 12 months out from the time the TPL assessment was concluded were included in the entity’s TPL assessments for the study horizon(s) in which the outage is planned.

However, a CEA is to verify that all outages, both planned and forced, including outages of Protection Systems, were included in the entity’s operational planning studies under the TOP standard for the study horizon(s) in which the outage is planned or occurs.

## Background

### TPL-002, TPL-003 and TPL-004

TPL-002, -003 and -004 address planning for the near term (years 1 through 5). TPL-002 and TPL-003 also address planning for the longer term (years 6 through 10).

<sup>1</sup> Compliance Enforcement Authorities include ERO auditors, investigators, enforcement personnel or any person authorized to assess issues of concern, potential non-compliance, and possible, alleged or confirmed violations of NERC Reliability Standard requirements.

<sup>2</sup> FERC approved an interpretation for TOP-002-2 on December 2, 2009 in the *Order on Reliability Standard Interpretation*, 129 FERC ¶ 61,191 (2009) and an interpretation for TPL-002 and TPL-003 on April 23, 2010; in the *Order on Reliability Standard Interpretation*, 131 FERC ¶ 61,068 (2010).

The three standards contain similar requirements specifying that the Planning Authority<sup>3</sup> and Transmission Planner (TP) shall each demonstrate, through a valid assessment, that its portion of the interconnected transmission system is evaluated for the risks and consequences of contingencies, and to be valid, the assessment shall include the planned (including maintenance) outage of any bulk electric equipment (including Protection Systems or their components) at those demand levels for which planned (including maintenance) outages are performed (see TPL-002-0 R1.3.12, TPL-003-0 R1.3.12 and TPL-004-0 R1.3.9).

#### TOP-002

TOP-002 addresses planning for current-day, next-day, and seasonal operations.

This standard requires that the TOP shall perform seasonal, next-day, and current-day Bulk Electric System (BES) studies to determine System Operating Limits (SOLs), and shall update these BES studies as necessary to reflect current system conditions (R11).

#### Planned Outages in the Transmission Planning Horizon

Although there are situations in which outages are planned and scheduled more than 12 months in advance, more often outages are placed on an approved TOP or BA outage schedule in the operating horizon, less than one year out from the planned outage. Most maintenance plans are developed, and therefore the associated outages are planned with less lead time. In cases where outages are scheduled less than one year out, the lead time makes it impractical for inclusion in planning studies under the TPL timeframe.

#### Evaluation of Protection System Outages

Protection Systems must operate and clear faults within the required clearing time to satisfy system performance requirements. All outages of Protection Systems or their components that affect the reliability performance of the transmission system must be evaluated for the periods they are scheduled, in the planning horizon in TPL assessments and in the operational planning timeframe through operating studies.

For example, if a transmission line has A and B protection packages that are not functionally equivalent and the outage of one protection package affects the operating speed of the Protection System, the impact of slower fault clearing on the power delivery capability of the Bulk Power System (BPS) must be considered in the assessments and studies. Such impacts also must be considered when a transmission line has a single protection package and one component of the package (e.g., the communication system) is taken out of service.

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<sup>3</sup> The Planning Authority was renamed “Planning Coordinator” in the Functional Model dated February 13, 2007. TPL -002, TPL-003 and TPL-004 use the former “Planning Authority” name; the Functional Model terminology was a change in name only and did not affect responsibilities.

## Compliance Application

TPL-002 provides, in pertinent part:

**R1.3.** *Be supported by a current or past study and/or system simulation testing that addresses each of the following categories, showing system performance following Category B of Table 1 (single contingencies). The specific elements selected (from each of the following categories) for inclusion in these studies and simulations shall be acceptable to the associated Regional Reliability Organization(s).<sup>4</sup> ...*

**R1.3.12.** *Include the planned (including maintenance) outage of any bulk electric equipment (including protection systems or their components) at those demand levels for which planned (including maintenance) outages are performed.*

TPL-003 provides, in pertinent part:

**R1.3** *Be supported by a current or past study and/or system simulation testing that addresses each of the following categories, showing system performance following Category C of Table 1 (multiple contingencies). The specific elements selected (from each of the following categories) for inclusion in these studies and simulations shall be acceptable to the associated Regional Reliability Organization(s).<sup>5</sup> ...*

**R1.3.12.** *Include the planned (including maintenance) outage of any bulk electric equipment (including protection systems or their components) at those demand levels for which planned (including maintenance) outages are performed.*

TPL-004 provides, in pertinent part:

**R1.3.** *Be supported by a current or past study and/or system simulation testing that addresses each of the following categories, showing system performance following Category D contingencies of Table I. The specific elements selected (from within each of the following categories) for inclusion in these studies and simulations shall be acceptable to the associated Regional Reliability Organization(s).<sup>6</sup> ...*

**R1.3.9.** *Include the planned (including maintenance) outage of any bulk electric equipment (including protection systems or their components) at those demand levels for which planned (including maintenance) outages are performed.*

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<sup>4</sup> Consistent with applicable FERC precedent, the term 'Regional Reliability Organization' in this context refers to the Regional Entity. Pursuant to Federal Energy Regulatory Commission (FERC) Order 693, FERC eliminated the RRO as the appropriate Compliance Monitor for standards and replaced it with the Regional Entity (RE). See paragraph 157 of Order 693.

<sup>5</sup> See footnote 4.

<sup>6</sup> See footnote 4.

Outages to be included in TPL assessments

A CEA is to verify that a registered entity's TPL assessments include all "planned" equipment outages, including Protection System outages, that are to occur within the near-term (years one through five) and longer-term (years six through 10) planning horizons.

A CEA is to use the following to determine whether the outage is "planned" in the TPL planning horizon as required by the standard:

1. if it is included on an approved, applicable TOP or BA outage schedule; and
2. if the outage was included on the approved, applicable TOP or BA outage schedule more than 12 months from the time the TPL assessment was concluded; and
3. if it is an outage of a Protection System, it affects the reliability performance of transmission system.

TOP-002 R11

TOP-002 R11 provides:

**R11.** *The Transmission Operator shall perform seasonal, next-day, and current-day Bulk Electric System studies to determine SOLs. Neighboring Transmission Operators shall utilize identical SOLs for common facilities. The Transmission Operator shall update these Bulk Electric System studies as necessary to reflect current system conditions; and shall make the results of Bulk Electric System studies available to the Transmission Operators, Balancing Authorities (subject to confidentiality requirements), and to its Reliability Coordinator.*

Outages to be included in TOP evaluations

Under R11, a CEA is to verify that the TOP incorporated **all** outages – including outages of Protection Systems that affect the reliability performance of the transmission system – in its current-day, next-day, and seasonal operational planning studies to properly account for current system conditions as discussed above.

**Effective Period for CAN**

This CAN is effective upon posting as final on the NERC Web site, and is to be used by CEAs to assess compliance from the posting date forward, regardless of the start date of any non-compliance or Possible Violation. It supersedes all prior communications and will remain in effect until such time that a future version of a FERC or other applicable government authority approved standard or interpretation becomes effective and addresses the specific issue contained in this CAN.

For any enforcement action in process and for audits that have been initiated,<sup>7</sup> a CEA will apply the appropriate discretion, including consideration of the specific facts and circumstances of the non-compliance, in determining whether to assess compliance pursuant to this CAN.

<sup>7</sup> "Initiated" means that a registered entity has received notification of the upcoming audit.

**Evidence of Compliance**TPL-002, TPL-003, TPL-004

A CEA is to assess the following to obtain reasonable assurance of the entity's compliance:

1. Evidence that a valid assessment for its portion of the interconnected transmission system had been completed and included any outages of bulk electric equipment, including outages of equipment or Protection Systems that were included on an approved, applicable TOP or BA outage schedule more than 12 months out from the time the TPL assessment was concluded.

TOP-002 R11

A CEA is to assess the following to obtain reasonable assurance of the entity's compliance:

1. Evidence that its current-day, next-day, and seasonal operational planning studies evaluated all outages, including outages of Protection Systems.

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*This document is designed to convey compliance monitoring instruction to achieve a measure of consistency among auditors and Compliance Enforcement Authorities. It is not intended to establish new requirements under NERC's Reliability Standards or to modify the requirements in any existing NERC Reliability Standard. Compliance will continue to be assessed based on language in the currently enforceable NERC Reliability Standards. This document is not intended to define the exclusive method an entity must use to comply with a particular standard or requirement, or foreclose a registered entity's demonstration by alternative means that it has complied with the language and intent of the standard or requirement, taking into account the facts and circumstances of a particular registered entity. Implementation of information in this document is not a substitute for compliance with requirements in NERC's Reliability Standards.*