

**Compliance Questionnaire and**

**Reliability Standard Audit Worksheet**

**TOP-003-1 — Planned Outage Coordination**

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

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

**Applicable Function(s): GOP, TOP, BA, RC**

**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. 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. Include additional sheets if necessary.

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

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

**TOP-003-1 — Planned Outage Coordination**

**Purpose:**

Scheduled generator and transmission outages that may affect the reliability of interconnected operations must be planned and coordinated among Balancing Authorities, Transmission Operators, and Reliability Coordinators.

**Applicability:**

Generator Operators

Transmission Operators

Balancing Authorities

Reliability Coordinators

**NERC BOT Approval Date:**

**FERC Approval Date:**

**Reliability Standard Enforcement Date in the United States:**

**Requirements:**

1. Generator Operators and Transmission Operators shall provide planned outage information.
   1. Each Generator Operator shall provide outage information daily to its Transmission Operator for scheduled generator outages planned for the next day (any foreseen outage of a generator greater than 50 MW). The Transmission Operator shall establish the outage reporting requirements.
   2. Each Transmission Operator shall provide outage information daily to affected Balancing Authorities and Transmission Operators for scheduled generator and bulk transmission outages planned for the next day (any foreseen outage of a transmission line or transformer greater than 100 kV or generator greater than 50 MW) that may collectively cause or contribute to an SOL or IROL violation or a regional operating area limitation.
   3. Such information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection.

**Describe, in narrative form, how you meet compliance with this requirement:**

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

**Question:** Describe your methodology for determining transmission or generation elements that do no need to be reported.

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

# R1 Supporting Evidence and Documentation

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

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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 TOP-003-1 R1**

\_\_\_ Review data submittals and confirm that they conform to established reporting requirements.

\_\_\_ Review the evidence provided to verify that the Transmission Operator has established documented outage reporting procedures.

\_\_\_ Review outage schedules for transmission and/or generation as applicable and compare to

outage submissions

\_\_\_ Review methodology or criteria of determining if a transmission or generation element does not need to be reported because it does not cause or contribute to an SOL or IROL

\_\_\_ Review logs of data submittal times.

\_\_\_ Review any applicable software applications that are used for requesting, tracking,

performing, or transmitting outages

**Detailed notes:**

1. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of system voltage regulating equipment, such as automatic voltage regulators on generators, supplementary excitation control, synchronous condensers, shunt and series capacitors, reactors, etc., among affected Balancing Authorities and Transmission Operators as required.

**Describe, in narrative form, how you meet compliance with this requirement:**

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

**Question:** Did you experience a planned outage of system voltage regulating equipment during the audit period? If yes, provide evidence of coordination.

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

# R2 Supporting Evidence and Documentation

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

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***This section must be completed by the Compliance Enforcement Authority.***

**Compliance Assessment Approach Specific to TOP-003-1 R2**

\_\_\_ Review coordination methods or procedures

\_\_\_ Review communications, logs, or other evidence to confirm that coordination occurred.

**Note to Auditor:**

* Coordination methods or procedures do not have to be in a formal written document.
* Coordination, as required by R2, involves two or more registered entities working together to achieve a desired result. Coordination among BAs, TOPs and GOPs is interwoven and is based on key information that each function provides. Some of the information used to coordinate is provided by the entities pursuant to requirements in other standards. Although not all-inclusive, a simplified example of how the three functions coordinate is as follows:
* The BA has knowledge of generation unit commitments and planned dispatch, which it must communicate to the TOP. Additionally, the BA provides dispatch orders for generation to the GOP based on requests for dispatch changes from the TOP.
* The GOP provides information on the availability, status, real and reactive capability, and real and reactive de-ratings of generating units to both the BA and the TOP.
* The TOP is responsible for the system configuration, managing the required must-run units for voltage and reactive control, and determining needs for system support. It provides voltage and reactive schedules to the GOP and requests the BA to provide additional capacity for system support as necessary, including reactive support to replace capacity affected by planned outages or de-ratings.
* A CEA is to verify that the BA coordinated with the GOP and the TOP pursuant to TOP-003 R2.
* A CEA is to verify that a BA provided planned generation unit commitment and dispatch to the TOP for the purpose of coordinating outages of system voltage regulating equipment, unless operating in a market that permits the GOP to perform unit commitment and dispatch. In the case where the GOP performs unit commitment and dispatch, this information would be provided to the TOP by the GOP rather than the BA.
* Additionally, a CEA is to verify that the BA responded to any requests from the TOP to dispatch units for reactive capacity resulting from coordinating outages of system voltage regulating equipment.
* The CEA is to verify these activities regardless of whether the BA operates under a traditional, vertically-integrated business model or through an unbundled market structure in which generation is operated separately from the transmission function.
* Since the BA only has knowledge of generation related resources, and is not responsible for knowing the status of other reactive resources, the CEA is not to hold the BA accountable for the planning and coordination of scheduled outages for reactive resources such as static var compensators (SVCs), static synchronous compensators (STATCOMs), or shunt and series capacitors, and reactors.

**Detailed notes:**

1. Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of telemetering and control equipment and associated communication channels between the affected areas.

**Describe, in narrative form, how you meet compliance with this requirement:**

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

**Question:** Did you experience a planned outage of telemetering or control equipment and associated communication channels during the audit period? If yes, provide evidence of coordination.

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

# R3 Supporting Evidence and Documentation

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

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***This section must be completed by the Compliance Enforcement Authority.***

**Compliance Assessment Approach Specific to TOP-003-1 R3**

\_\_\_ Review coordination methods or procedures

\_\_\_ Review communications or logs indicating that coordination occurred

NOTE: Coordination methods or procedures do not have to be in a formal written document.

**Detailed notes:**

1. Each Reliability Coordinator shall resolve any scheduling of potential reliability conflicts.

**Describe, in narrative form, how you meet compliance with this requirement:**

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

# R4 Supporting Evidence and Documentation

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

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***This section must be completed by the Compliance Enforcement Authority.***

**Compliance Assessment Approach Specific to TOP-003-1 R4**

\_\_\_ Identify reliability conflict resolution process, procedures, or empowerment agreements that verify the Reliability Coordinator has the authority to resolve scheduling conflicts.

\_\_\_ Review logs or decisions of any scheduling conflicts

**Detailed notes:**

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

**Updated Through October 11, 2011**

**TOP-003-1**

**Order 693**

P 1567. The eight Transmission Operations (TOP) Reliability Standards apply to transmission operators, generator operators and balancing authorities. The goal of these Reliability Standards is to ensure that the transmission system is operated within operating limits. Specifically, these Reliability Standards cover the responsibilities and decision-making authority for reliable operations, requirements for operations planning, planned outage coordination, real-time operations, provision of operating data, monitoring of system conditions, reporting of operating limit violations and actions to mitigate such violations. The Interconnection Reliability Operations and Coordination (IRO) group of Reliability Standards complement these proposed TOP Reliability Standards.

P 1609. Reliability Standard TOP-003-1 requires transmission operators that operate facilities greater than 100 kV, generator operators that operate facilities greater than 50 MW and balancing authorities to coordinate transmission and generator maintenance schedules. Where a conflict in maintenance schedule arises, the reliability coordinator is authorized to resolve the conflict.

P 1619. The Commission approves TOP-003-1 as mandatory and enforceable…

P 1624. … registered entities below the thresholds currently defined in Requirement R1 of the Reliability Standard may have an impact on reliability and therefore should be required to submit data on their planned outages…

P 1626. Planned outage coordination is a necessary element of reliable operations, and TOP-003-1 promotes that goal. Accordingly, the Commission approves the Reliability Standard as mandatory and enforceable…

**Order No. 693-A**

P 42. TOP-003-1 contains Requirements that can have a significant impact on both the reliability of the Bulk-Power System and on competition with regard to available transfer capability (ATC). The Commission’s approval of TOP-003-1 does not override either the compliance registry or the ERO. The planning authority or transmission planner should inform its Regional Entity if it is not receiving cooperation in getting the information it requires. We note that section 39.2(d) of our regulations requires each user, owner or operator of the Bulk-Power System to provide the Commission, the ERO and the applicable Regional Entity such information as is necessary to implement section 215 of the FPA. If a problem arises in obtaining information necessary to calculate ATC, the Commission may revisit this matter in the future. For example, if entities are unable to obtain the required information under TOP-003-1, the Commission might require the ERO, through the Reliability Standards development process, to develop a provision to ensure that all jurisdictional entities that must provide information pursuant to TOP-003-1 because of a particular reliability need are added to the registry, even if only to meet the requirements of TOP-003-1.

**Order No. 748, 18 CFR Part 40 Mandatory Reliability Stds. for Interconnection Reliability Operating Limits, 134 FERC ¶ 61,213 (March 17, 2011).**

1. Under section 215 of the Federal Power Act (FPA), n1 the Federal Energy Regulatory Commission (Commission) approves three new Interconnection Reliability Operations and Coordination (IRO) Reliability Standards and seven revised Reliability Standards related to Emergency Preparedness and Operations (EOP), IRO, and Transmission Operations (TOP). The proposed Reliability Standards were submitted to the Commission for approval by the North American Electric Reliability Corporation (NERC), which the Commission has certified as the Electric Reliability Organization (ERO) responsible for developing and enforcing mandatory Reliability Standards. n2 These Reliability Standards were designed to prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring that the reliability coordinator has the data necessary to assess its reliability coordinator area during the operations horizon [\*\*5] and that it takes prompt action to prevent or mitigate instances of exceeding Interconnection Reliability Operating Limits (IROL). n3 The Commission also approves the addition of two new terms to the NERC Glossary of Terms (NERC Glossary). In addition, the Commission approves NERC's proposed revisions to Reliability Standards EOP-001-1, IRO-002-2, IRO-004-2, IRO-005-3, TOP-003-1, TOP-005-2, and TOP-006-2, which remove requirements for the reliability coordinator to monitor and analyze system operating limits (SOL) n4 other than IROLs.

21. The Commission hereby adopts its NOPR proposals and approves new Reliability Standards IRO-008-1, IRO-009-1, and IRO-010-1a; revised Reliability Standards EOP-001-1, IRO-002-2, IRO-004-2, IRO-005-3, TOP-003-1, TOP-005-2, and TOP-006-2; and the two new NERC Glossary terms: "Operational Planning Analysis" and "Real-time Assessment." In approving these Reliability Standards, the Commission concludes that they are just, reasonable, not unduly discriminatory or preferential, and in the public interest. These Reliability Standards serve an important reliability purpose in seeking to prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring that the reliability coordinator has the data necessary to assess its reliability coordinator area during the operations horizon and that it takes prompt action to prevent [\*\*21] or mitigate instances of exceeding IROLs. Moreover, they clearly identify the entities to which they apply and contain clear and enforceable requirements. Commenters addressed many of the Commission concerns discussed in the NOPR and in some areas the ERO has indicated that it is continuing to study some issues related to the Commission concerns. The Commission encourages the ERO, applying its technical expertise, to continue such reviews and make any necessary changes to applicable Reliability Standards.

57. In its discussion of Reliability Standard TOP-003-1, the Commission noted that Requirement R3 of proposed Reliability Standard IRO-010-1a requires entities to provide data and information to the reliability coordinator in accordance with the reliability coordinator's specifications. The Commission expressed concern that this [\*\*45] requirement does not specify outage coordination data and, therefore, the reliability coordinator may not receive adequate outage coordination data to support the Operational Planning Analysis. Accordingly, the Commission sought comment on whether IRO-010-1a should specify necessary outage coordination data.

70. Separately from NERC's Petition here, on March 5, 2010, NERC submitted the first of two VSL compliance filings (Filing 1) to the Commission's VSL Orders, n40 which contained the VSL assignments for the original set of 83 Reliability Standards approved by the Commission and NUC-001-2. In addition, NERC requested an extension for filing the remaining VSLs until the 3rd quarter of 2010. On July 6, 2010, the Commission issued a Notice of Extension of Time up to and including December 1, 2010, for Filing 2. n41 On December 1, 2010, NERC submitted a compliance filing to the Commission in Docket No. RR08-04-006 (Filing 2). In Filing 2, NERC submitted VSLs both for Reliability Standards that are pending at the Commission and Reliability Standards previously approved by the Commission. Filing 2 includes VSLs to supersede those in NERC's Petition in Docket No. RM10-15-000 for EOP-001-1, IRO-002-2, IRO-004-2, IRO-005-3, IRO-008-1, IRO-009-1, IRO-010-1, IRO-010-1a, TOP-003-1, TOP-005-2, and TOP-006-2. n42

74. The Commission approves new Reliability Standards IRO-008-1, IRO-009-1, and [\*\*57] IRO-010-1a; revised Reliability Standards EOP-001-1, IRO-002-2, IRO-004-2, IRO-005-3, TOP-003-1, TOP-005-2, and TOP-006-2; and the two new NERC Glossary terms: "Operational Planning Analysis" and "Real-time Assessment." The three new Reliability Standards (IRO-008-1, IRO-009-1 and IRO-010-1a, governing reliability coordinator analyses, operational actions and data collection) replace parts of the currently-effective Reliability Standards EOP-001-0, IRO-002-1, IRO-004-1, IRO-005-2, TOP-003-0, TOP-005-1 and TOP-006-1 approved by the Commission in Order No. 693.

75. Thus, this final rule does not impose entirely new burdens on the affected entities. With the exception of the addition of Interchange Authority as an applicable entity in IRO-010-1a, the currently-effective standards EOP-001-0, IRO-002-1, IRO-004-1, IRO-005-2, TOP-003-0, TOP-005-1 and TOP-006-1 require actions by the same applicable group of entities. IRO-010-1a clarifies that balancing authorities, generator owners, generator operators, interchange authorities, load-serving entities, reliability coordinators, transmission operators, and transmission owners shall provide data and information, as specified, to the reliability [\*\*58] coordinator(s) with which it has a reliability relationship. n45 The requirements of IRO-008-1 and IRO-009-1 provide clarification from existing requirements, dictating the analysis and operational roles of the reliability coordinator.

**Revision History**

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| --- | --- | --- | --- |
| **Version** | **Date** | **Reviewers** | **Revision Description** |
| 1 | September 2011 | QRSAW WG | Original Document |
| 1 | October 2011 | NERC Legal | Updated Excerpts from FERC Orders from March 31, 2009 through and including October 11, 2011. |
| 1.1 | March 2014 | RSAW Task Force | Compliance guidance from CAN-0027 added to RSAW. |
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