

**Compliance Questionnaire and**

**Reliability Standard Audit Worksheet**

**IRO–010–1a — Reliability Coordinator Data Specification and Collection**

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

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

**Applicable Function(s): RC, BA, GO, GOP,** **IA, LSE, TOP, TO.**

**Auditors:**

**Disclaimer**

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

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

# Subject Matter Experts

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

**IRO-010-1a — Reliability Coordinator Data Specification and Collection**

**Purpose:**

To prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring the Reliability Coordinator has the data it needs to monitor and assess the operation of its Reliability Coordinator Area.

**Applicability:**

Reliability Coordinator

Balancing Authority

Generator Owner

Generator Operator

Interchange Authority

Load-Serving Entity

Transmission Operator

Transmission Owner

**NERC BOT Approval Date:**

**FERC Approval Date:**

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

**Requirements:**

1. The Reliability Coordinator shall have a documented specification for data and information to build and maintain models to support Real-time monitoring, Operational Planning Analyses, and Real-time Assessments of its Reliability Coordinator Area to prevent instability, uncontrolled separation, and cascading outages. The specification shall include the following: *(Violation Risk Factor: Low) (Time Horizon: Operations Planning)*
   1. List of required data and information needed by the Reliability Coordinator to support Real-Time Monitoring, Operational Planning Analyses, and Real-Time Assessments.
   2. Mutually agreeable format.
   3. Timeframe and periodicity for providing data and information (based on its hardware and software requirements, and the time needed to do its Operational Planning Analyses).
   4. Process for data provision when automated Real-Time system operating data is unavailable.

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

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

R1 Supporting Evidence and Documentation

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

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

**Compliance Assessment Approach Specific to IRO-010-1a R1**

\_\_\_\_ Verify the Reliability Coordinator has a documented specification for data and information to build and maintain models to support Real-time monitoring, Operational Planning Analyses, and Real-time Assessments of its Reliability Coordinator Area to prevent instability, uncontrolled separation, and cascading outages. The specification shall include the following:

\_\_\_\_A list of required data and information needed by the

Reliability Coordinator to support Real-Time Monitoring, Operational

Planning Analyses and Real-Time Assessments was specified.

\_\_\_\_ A mutually agreeable format.

\_\_\_\_ A timeframe and periodicity for providing data and information (based

on its hardware and software requirements, and the time needed to do its

Operational Planning Analyses) was specified.

\_\_\_\_ A process for data provision when automated Real-Time

system operating data is unavailable was specified.

**Detailed notes:**

**R2.** The Reliability Coordinator shall distribute its data specification to entities that have

Facilities monitored by the Reliability Coordinator and to entities that provide Facility

status to the Reliability Coordinator. *(Violation Risk Factor: Low) (Time Horizon:*

*Operations Planning)*.

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

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

R2 Supporting Evidence and Documentation

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

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

**Compliance Assessment Approach Specific to IRO-010-1a R2**

\_\_\_\_ Verify the Reliability Coordinator distributed its data specification

to entities that have Facilities monitored by the Reliability Coordinator

and to entities that provide Facility status to the Reliability Coordinator.

**Detailed notes:**

**R3.** Each Balancing Authority, Generator Owner, Generator Operator, Interchange

Authority, Load-serving Entity, Reliability Coordinator, Transmission Operator,

and Transmission Owner shall provide data and information, as specified, to the

Reliability Coordinator(s) with which it has a reliability relationship.

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

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

R3 Supporting Evidence and Documentation

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

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

**Compliance Assessment Approach Specific to IRO-010-1a R3**

\_\_\_\_ Verify each Balancing Authority, Generator Owner, Generator

Operator, Interchange Authority, Load-serving Entity, Reliability

Coordinator, Transmission Operator, and Transmission Owner

provided data and information, as specified, to the Reliability

Coordinator(s) with which it has a reliability relationship

**Detailed notes:**

Supplemental Information

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

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

Compliance Findings Summary (to be filled out by auditor)

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| **Req.** | **NF** | **PV** | **OEA** | **NA** | **Statement** |
| **1** |  |  |  |  |  |
| **2** |  |  |  |  |  |
| **3** |  |  |  |  |  |

Excerpts from FERC Orders -- For Reference Purposes Only

Updated Through October 11, 2011

IRO-010- 1a

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

7. On December 31, 2009, NERC submitted a petition to the Commission (NERC Petition) n13 seeking approval of proposed Reliability Standards IRO-008-1, IRO-009-1, and IRO-010-1a. Under these Reliability Standards, reliability coordinators must analyze and monitor IROLs within their Wide-Area n14 to prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection. These Reliability Standards do not require the reliability coordinator to analyze and monitor SOLs other than IROLs or to take preventive action to avoid or mitigate SOL violations within their reliability coordinator area. In developing the proposed IRO Reliability Standards, NERC determined that it was necessary to retire or modify certain requirements from several existing Reliability Standards. Therefore, NERC proposed revisions to Reliability Standards EOP-001-1, n15 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 SOLs other than IROLs. NERC also requests approval of new definitions "Operational Planning Analysis" and "Real-time Assessment."

3. IRO-010-1a

16. NERC proposes the addition of a new Reliability Standard, IRO-010-1a n24 to the current suite of IRO Reliability Standards. IRO-010-1a is designed to prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by mandating that the reliability coordinator have the data it needs to monitor and assess the operation of its reliability coordinator area.

n24 Because the interpretation for IRO-010-1 was completed before the filing of IRO-010-1, NERC requests Commission approval of IRO-010-1a, which includes the standard as interpreted.

17. The requirements in the Reliability Standard specify a formal request process for the reliability coordinator to explicitly identify the data and information it needs for reliability; and require the entities with the data to provide it as requested. The Reliability Standard applies to the reliability coordinator and to the other functional entities that must supply data to the reliability coordinator. n25 This includes entities that have been identified as owners, users, or operators of the Bulk-Power System.

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 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.

34. NERC states that current practices give the reliability coordinators the ability to provide assessments of the Bulk-Power System to their transmission operators on a Wide-Area basis. NERC believes it is unnecessary to require reliability coordinators to have additional responsibility to monitor SOLs other than IROLs. NERC also notes that there are checks in place that allow the reliability coordinator to monitor SOLs that could turn into IROLs. As an example, NERC points out that IRO-010-1a requires reliability coordinators to conduct Operational Planning Analyses and Real-Time Assessments to identify any IROLs that may be exceeded.

D. IRO-010-1a

56. In the NOPR, the Commission expressed concern that Reliability Standard IRO-010-1a does not require reliability coordinators to specify a list of minimum data needed for reliable operation of the Bulk-Power System. The Commission, therefore, sought comment on whether a minimum list of data is necessary for the effective sharing of data between neighboring reliability coordinators and, if so, what data should be included. The Commission also sought comment on how compatibility of data between neighboring reliability coordinators can be assured without a list of minimum data in this proposed Reliability Standard.

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 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.

Comments

58. NERC, the Joint Commenters and Midwest ISO contend that requiring a minimum list of data is not necessary for the effective sharing of data between neighboring reliability coordinators. NERC argues that requiring a list of minimum data not only could impair an entity's ability to provide the data to the reliability coordinator quickly, but could prevent a reliability coordinator from obtaining needed data quickly. NERC also notes that, during the development of the proposed Reliability Standard, the reliability coordinators that were polled indicated they already were receiving the data they needed without any issues and that the data and information they received varied from one reliability coordinator to another. The Joint Commenters argue that it is unnecessary to develop such a requirement because two interconnected parties can agree upon the appropriate type and level of data it needs from the other, taking into consideration their respective tools and capabilities. Midwest ISO argues that many reliability coordinators already have developed coordination agreements with their neighbors that identify the information necessary for effective data sharing. Midwest ISO contends that a generic list of minimum data could be inadequate to meet regional needs and could create conflicts with existing coordination agreements. Midwest ISO further contends that a minimum list could curb creativity and innovation as capabilities develop new uses for data.

59. NERC and the Joint Commenters also urge the Commission to refrain from requiring NERC to modify IRO-010-1a to specify the necessary outage coordination data for all reliability coordinators. They contend that such an approach would not account for the significantly varying facilities located within the reliability coordinators' area and allow for the flexibility to specify the data needed for its respective area.

60. Reiterating comments it raised during the standard development process, WECC opposes the requirement in R1.2 that the parties reach mutual agreement with respect to the format of the data and information that the reliability coordinator receives. WECC argues that, due to the large number of entities that must provide data to the reliability coordinator, the requirement for mutually agreeable formats may cause the reliability coordinator to receive data in a multitude of diverse formats. WECC also believes that requiring mutually agreeable data formats could delay the submission of data by a submitting entity until agreement can be reached via negotiation or dispute resolution. WECC argues that more than one party is involved in the formulation of an agreeable format yet only a reliability coordinator will be found non-compliant when the reliability coordinator and transmission operators or balancing authorities within the reliability coordinator area fail to reach an agreement over an acceptable format.

Commission Determination

61. The Commission agrees with commenters that it is unnecessary to direct NERC to develop a specific list of minimum data for the effective sharing of data between neighboring reliability coordinators under Reliability Standard IRO-010-1a. NERC and other entities confirm that reliability coordinators currently obtain necessary data without such a specific list. In addition, as commenters point out, a minimum list may conflict with coordination agreements currently in place which identify the information necessary for effective data sharing. With regard to the concern expressed in the NOPR regarding outage coordination data, we accept that reliability coordinators currently obtain necessary data. If, in the future, reliability coordinators are not able to obtain the necessary outage coordination data, we would ask NERC to consider whether a Reliability Standard should be developed for the reliability coordinators to obtain such data.

62. In response to WECC's concerns about the submission of data in mutually agreeable formats under Requirement R1.2, we do not believe any modification is necessary. As NERC states in its Petition, by specifying that the format must be mutually agreeable, the standard supports efficiency by precluding the submission of data that is in a format that cannot be used. We agree. NERC states that current data exchange formats are acceptable. Therefore, entities can continue to utilize existing agreements regarding data exchange. While disputes may arise in the future, the Reliability Standard does not dictate a specific dispute resolution process in the interpretation leaving reliability coordinators and other entities options for informal resolution of a dispute on the format of data and flexibility in choosing a dispute resolution process to reach an agreement.

63. Accordingly, the Commission approves IRO-010-1a as submitted.

68. NERC proposes a complete set of violation severity levels and violation risk factors for proposed new Reliability Standards IRO-008-1, IRO-009-1, and IRO-010-1a. In addition, NERC proposes to apply the existing set of violation severity levels and violation risk factors assigned to the proposed modified requirements.

69. NERC states that it developed the violation severity levels for the new IRO Reliability Standards before the Commission issued its June 19, 2008 Order on violation severity levels. n38 NERC also notes that the proposed violation severity levels were developed before NERC proposed a new methodology for assigning violation severity levels and violation risk factors. n39 As a result, NERC states that some of the proposed violation severity levels do not comport with the Commission's guidelines on violation severity levels and some do not comport with the NERC's revised guidelines. NERC identified differences and committed to propose revisions to the violation severity levels.

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

72. Because a determination has not yet been made regarding NERC's "roll-up" approach pending before the Commission in Docket Nos. RR08-4-005 and RR08-4-006, the Commission will defer discussion on the proposed violation risk factors and violation severity levels assigned to IRO-008-1, IRO-009-1, and IRO-010-1a, until after the Commission issues a final order acting on NERC's petition in these proceedings.

74. The Commission 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." 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 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 11, 2011 | NERC Legal | Add Excerpts from FERC Orders through and including October 11, 2011. |
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