

**Reliability Standard Audit Worksheet[[1]](#footnote-2)**

# MOD-032-1 – Data for Power System Modeling and Analysis

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

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| **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)[[2]](#footnote-3):** | 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**

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|  | **BA** | **DP** | **GO** | **GOP** | **IA** | **LSE** | **PA/PC** | **PSE** | **RC** | **RP** | **RSG** | **TO** | **TOP** | **TP** | **TSP** |
| **R1** |  |  |  |  |  |  | X |  |  |  |  |  |  | X |  |
| **R2** | X |  | X |  |  | X |  |  |  | X |  | X |  |  | X |
| **R3** | X |  | X |  |  | X |  |  |  | X |  | X |  |  | X |
| **R4** |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |

**Legend:**

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| 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 |

Findings

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

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| **Req.** | **Finding** | **Summary and Documentation** | **Functions Monitored** |
| **R1** |  |  |  |
| **R2** |  |  |  |
| **R3** |  |  |  |
| **R4** |  |  |  |

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| **Req.** | **Areas of Concern** |
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| **Req.** | **Recommendations** |
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| **Req.** | **Positive Observations** |
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Subject Matter Experts

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

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

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| **SME Name** | **Title** | **Organization** | **Requirement(s)** |
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R1 Supporting Evidence and Documentation

**R1.** Each Planning Coordinator and each of its Transmission Planners shall jointly develop steady-state, dynamics, and short circuit modeling data requirements and reporting procedures for the Planning Coordinator’s planning area that include:

**1.1.** The data listed in Attachment 1.

**1.2.** Specifications of the following items consistent with procedures for building the Interconnection-wide case(s):

**1.2.1.** Data format;

**1.2.2.** Level of detail to which equipment shall be modeled;

**1.2.3.** Case types or scenarios to be modeled; and

**1.2.4.** A schedule for submission of data at least once every 13 calendar months.

**1.3.** Specifications for distribution or posting of the data requirements and reporting procedures so that they are available to those entities responsible for providing the data.

**M1.** Each Planning Coordinator and Transmission Planner shall provide evidence that it has jointly developed the required modeling data requirements and reporting procedures specified in Requirement R1.

**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[[3]](#endnote-2):

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| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Documents (e.g. emails, screen shot of web posting, meeting minutes, or the inclusion of the names of the jointly collaborating entities in any written procedures) showing that entity(s) jointly developed required modeling data requirements and reporting procedures. |
| Modeling requirements documents developed by the entity(s). |
| Posting and reporting procedures for modeling requirements documents. |

Registered Entity Evidence (Required):

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

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Compliance Assessment Approach Specific to MOD-032-1, R1

***This section to be completed by the Compliance Enforcement Authority***

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| Review evidence provided and verify that modeling data requirements and reporting procedures were both jointly developed and contain the following items: | |
|  | (Part 1.1) The data in Attachment 1 |
|  | (Part 1.2.1) Specification of data format |
|  | (Part 1.2.2) Level of detail to which equipment shall be modeled |
|  | (Part 1.2.3) Case types or scenarios to be modeled |
|  | (Part 1.2.4) A schedule for submission of data at least once every 13 calendar months |
|  | (Part 1.3) Specifications for distribution or posting of the data requirements and reporting procedures so that they are available to those entities responsible for providing the data. |
| **Note to Auditor:** Requirement R1 has an effective date of 7/1/2015. | |

Auditor Notes:

R2 Supporting Evidence and Documentation

**R2.** Each Balancing Authority, Generator Owner, Load Serving Entity, Resource Planner, Transmission Owner, and Transmission Service Provider shall provide steady-state, dynamics, and short circuit modeling data to its Transmission Planner(s) and Planning Coordinator(s) according to the data requirements and reporting procedures developed by its Planning Coordinator and Transmission Planner in Requirement R1. For data that has not changed since the last submission, a written confirmation that the data has not changed is sufficient.

**M2.** Each registered entity identified in Requirement R2 shall provide evidence, such as email records or postal receipts showing recipient and date, that it has submitted the required modeling data to its Transmission Planner(s) and Planning Coordinator(s); or written confirmation that the data has not changed.

**Registered Entity Response (Required):**

**Question:** Has entity’s steady-state, dynamics, and short circuit modeling data changed since the last submission?

Yes  No

If Yes, proceed to the Compliance Narrative section below. If No, entity should provide written confirmation(s) sent to Transmission Planner(s)/Planning Coordinator(s) that data has not changed and proceed to the next requirement.

[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 Requestedi:

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| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Documentation (e.g. email records or postal receipts showing recipient and date) showing that modeling data was submitted by the entity(s) per jointly developed modeling requirements from R1. |
| Dated, written confirmation sent to applicable Transmission Planner and Planning Coordinator that data has not changed since the last submission. |

Registered Entity Evidence (Required):

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

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Compliance Assessment Approach Specific to MOD-032-1, R2

***This section to be completed by the Compliance Enforcement Authority***

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| Review documentation provided by entity and verify that: | |
|  | (R2) Entity’s data submission meets Planning Coordinator’s and Transmission Planner’s data requirements developed in Requirement R1. |
|  | (R2) Entity’s data submission meets Planning Coordinator’s and Transmission Planner’s reporting procedures developed in Requirement R1. |
|  | (R2) Entity has provided written confirmation if no changes have occurred. |
| **Note to Auditor:** Requirement R2 has an effective date of 7/1/2016.  The purpose of Requirement R2 is to support the communication and transmission of data between certain entities and their Transmission Planners and Planning Coordinators. Accordingly, the auditor should focus on whether the data submission occurred, and whether it met the requirements established by the Transmission Planner and Planning Coordinator in Requirement R1. The accuracy of the data submitted is addressed in Requirement R3 where Transmission Planners and Planning Coordinators have an opportunity to review the modeling data provided and solicit edits or explanations from the submitting entities. The accuracy and completeness of the data the entity provided should not be a focus area for an auditor in evaluating an entity’s compliance with Requirement R2. Transmission Planners and Planning Coordinators are in position, and have the tools necessary, to assess the quality attributes of the data. | |

Auditor Notes:

R3 Supporting Evidence and Documentation

**R3.** Upon receipt of written notification from its Planning Coordinator or Transmission Planner regarding technical concerns with the data submitted under Requirement R2, including the technical basis or reason for the technical concerns, each notified Balancing Authority, Generator Owner, Load Serving Entity, Resource Planner, Transmission Owner, or Transmission Service Provider shall respond to the notifying Planning Coordinator or Transmission Planner as follows:

**3.1.** Provide either updated data or an explanation with a technical basis for maintaining the current data;

**3.2**. Provide the response within 90 calendar days of receipt, unless a longer time period is agreed upon by the notifying Planning Coordinator or Transmission Planner.

**M3.** Each registered entity identified in Requirement R3 that has received written notification from its Planning Coordinator or Transmission Planner regarding technical concerns with the data submitted under Requirement R2 shall provide evidence, such as email records or postal receipts showing recipient and date, that it has provided either updated data or an explanation with a technical basis for maintaining the current data to its Planning Coordinator or Transmission Planner within 90 calendar days of receipt (or within the longer time period agreed upon by the notifying Planning Coordinator or Transmission Planner), or a statement that it has not received written notification regarding technical concerns with the data submitted.

**Registered Entity Response (Required):**

**Question:** Has entity received written notification from its Planning Coordinator or Transmission Planner regarding technical concerns with the data submitted under Requirement R2, including the technical basis or reason for the technical concerns during the compliance monitoring period?  Yes  No

If Yes, proceed to the Compliance Narrative section below. If No, entity should provide a statement that such notification was not received during the compliance monitoring period and proceed to the next requirement.

[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 Requestedi:

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| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Written notification from Planning Coordinator or Transmission Planner of technical concerns on modeling data submitted. |
| Dated submission of updated data or explanation with technical basis for maintaining current data to Planning Coordinator or Transmission Planner. |
| Documentation of agreement with Planning Coordinator or Transmission Planner if time period for submission is extended beyond 90 days, if applicable; or |
| Statement that entity did not receive a written notification regarding technical concerns with the data submitted, if applicable. |

Registered Entity Evidence (Required):

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

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Compliance Assessment Approach Specific to MOD-032-1, R3

***This section to be completed by the Compliance Enforcement Authority***

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| If entity has received a written notification from Planning Coordinator or Transmission Planner regarding technical concerns, determine if: | |
|  | (3.1) Entity provided updated data or explanation with technical basis. |
|  | (3.2) Response was provided within 90 days or time period agreed upon by Planning Coordinator or Transmission Planner. |
| **Note to Auditor:** Requirement R3 has an effective date of 7/1/2016.  The auditor may inquire with entity’s Planning Coordinator or Transmission Planner regarding whether any such notifications were made. | |

Auditor Notes:

R4 Supporting Evidence and Documentation

**R4.** Each Planning Coordinator shall make available models for its planning area reflecting data provided to it under Requirement R2 to the Electric Reliability Organization (ERO) or its designee to support creation of the Interconnection-wide case(s) that includes the Planning Coordinator’s planning area.

**M4.** Each Planning Coordinator shall provide evidence, such as email records or postal receipts showing recipient and date, that it has submitted models for its planning area reflecting data provided to it under Requirement R2 when requested by the ERO or its designee.

**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 Requestedi:

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| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Dated request or schedule from the ERO or its designee to provide models developed using data from R2. |
| Dated model submission to the ERO or its designee. |

Registered Entity Evidence (Required):

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

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Compliance Assessment Approach Specific to MOD-032-1, R4

***This section to be completed by the Compliance Enforcement Authority***

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| Verify the following: | |
|  | (R4) Entity submitted models for its planning area to the ERO or its designee. |
| **Note to Auditor:** Requirement R4 has an effective date of 7/1/2016. Auditor may verify with personnel within the ERO, or its designee, regarding its requests made of the entity to support creation of the Interconnection-wide case(s). If ERO personnel inform that entity provided required information, then no further testing of this requirement is necessary. | |

Auditor Notes:

Additional Information:



Reliability Standard

*The RSAW developer should provide the following information without hyperlinks. Update the information below as appropriate.*

The full text of MOD-032-1 may be found on the NERC Web Site (www.nerc.com) under “Program Areas & Departments”, “Reliability Standards.”

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

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

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

Sampling Methodology [If developer deems reference applicable]

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

Regulatory Background

Reliability Standard MOD-032-1 consolidates the existing MOD-010 through MOD-015 Reliability Standards into a single standard. In [Order No. 693](http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/ORDER%20693.pdf),[[4]](#footnote-4) the Commission approved Reliability Standards MOD-010-0 and MOD-012-0, but neither accepted nor remanded proposed Reliability Standards MOD-011-0, MOD-013-1, MOD-014-0, and MOD-015-0.1.

In a [letter order](http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/May_1_2014_Order_Aprpving_MOD_B_Standards.pdf) issued May 1, 2014, FERC approved the consolidation of the existing MOD-010 through MOD-015 Reliability Standards into a single standard.

FERC Orders

Letter Order

FERC Letter Order, Docket No. RD14-5-000 (May 1, 2014). Order approving consolidation of existing MOD-010 through MOD-015 Reliability Standards into a single standard.

<http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/May_1_2014_Order_Aprpving_MOD_B_Standards.pdf>.

Page 1 In approving MOD-032-1, FERC stated “ Reliability Standard MOD-032-1 requires data submissions by applicable data owners to their respective transmission planners and planning coordinators to support the interconnection model building process in their interconnection.”

Order No. 693

<http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/ORDER%20693.pdf>.

P 1147 In approving MOD-010-0, FERC stated “[F]ailure to have the data needed for the steady state analysis would halt regional reliability assessment processes and hinder planners from accurately predicting future system conditions, which would be detrimental to system reliability.”

P 1177 In approving MOD-012-0, FERC stated “[F]ailure to provide the data needed for dynamics system modeling and simulation would halt regional reliability assessment processes and impede planners from accurately predicting future system conditions, which would be detrimental to system reliability. “

Revision History for RSAW

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| **Version** | **Date** | **Reviewers** | **Revision Description** |
| 1 | 04/22/2015 | RSAW Task Force, CMFG, ECEMG, NERC Compliance, NERC Legal | New Document |
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1. 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. [↑](#footnote-ref-2)
2. Compliance Assessment Date(s): The date(s) the actual compliance assessment (on-site audit, off-site spot check, etc.) occurs. [↑](#footnote-ref-3)
3. 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. [↑](#endnote-ref-2)
4. *Mandatory Reliability Standards for the Bulk-Power System,* Order No. 693, 72 Fed. Reg. 16416 (Apr. 4, 2007), FERC Stats. And Regs.¶ 31,242, *order on reh’g,* Order No. 693-A, 120 FERC ¶ 61,053 (2007). [↑](#footnote-ref-4)