

# Reliability Standard Audit Worksheet<sup>1</sup>

## BAL-005-1 – Balancing Authority Control

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

**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)<sup>2</sup>:** 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

	BA	DP	GO	GOP	IA	LSE	PA/PC	PSE	RC	RP	RSG	TO	TOP	TP	TSP
R1	X														
R2	X														
R3	X														
R4	X														
R5	X														
R6	X														
R7	X														

### Legend:

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

<sup>1</sup> 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.

<sup>2</sup> Compliance Assessment Date(s): The date(s) the actual compliance assessment (on-site audit, off-site spot check, etc.) occurs.

**DRAFT** NERC Reliability Standard Audit Worksheet

**Findings**

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

Req.	Finding	Summary and Documentation	Functions Monitored
R1			
R2			
R3			
R4			
R5			
R6			
R7			

Req.	Areas of Concern

Req.	Recommendations

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):**

SME Name	Title	Organization	Requirement(s)

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**R1 Supporting Evidence and Documentation**

- R1.** The Balancing Authority shall use a design scan rate of no more than six seconds in acquiring data necessary to calculate Reporting ACE.
  
- M1.** Each Balancing Authority will have dated documentation demonstrating that the data necessary to calculate Reporting ACE was designed to be scanned at a rate of no more than six seconds. Acceptable evidence may include historical data, dated archive files; or data from other databases, spreadsheets, displays that demonstrate compliance.

**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:**

<b>Provide the following evidence, or other evidence to demonstrate compliance.</b>
Evidence that data acquisition necessary to calculate Actual Net Interchange for Tie-Lines and Pseudo-Ties uses a design scan rate of no more than six seconds.
Evidence that data acquisition necessary to calculate Scheduled Net Interchange for Dynamic Schedules uses a design scan rate of no more than six seconds.
Evidence that data acquisition of frequency used to calculate Reporting ACE is designed to be scanned at a rate of no more than six seconds.

**Registered Entity Evidence (Required):**

<b>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.</b>					
File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

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


**Compliance Assessment Approach Specific to BAL-005-1, R1**

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

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	Verify that data acquisition necessary to calculate Actual Net Interchange for each Tie-Line and Pseudo-Tie uses a design scan rate of no more than six seconds.
	Verify that data acquisition necessary to calculate Scheduled Net Interchange for each Dynamic Schedule uses a design scan rate of no more than six seconds.
	Verify that data acquisition of frequency used to calculate Reporting ACE is designed to be scanned at a rate of no more than six seconds.
<b>Note to Auditor:</b> Data acquisition of frequency used to calculate Reporting ACE will usually include several sources, each of which should be verified for a design scan rate of no more than six seconds.	

**Auditor Notes:**

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**R2 Supporting Evidence and Documentation**

**R2.** A Balancing Authority that is unable to calculate Reporting ACE for more than 30--consecutive minutes shall notify its Reliability Coordinator within 45 minutes of the beginning of the inability to calculate Reporting ACE.

**M2.** Each Balancing Authority will have dated records to show when it was unable to calculate Reporting ACE for more than 30 consecutive minutes and that it notified its Reliability Coordinator within 45 minutes of the beginning of the inability to calculate Reporting ACE. Such evidence may include, but are not limited to, dated voice recordings, operating logs, or other communication documentation.

**Registered Entity Response (Required):**

**Question:** During the monitoring period, was the entity unable to calculate Reporting ACE for more than 30-consecutive minutes?      Yes    No

[If Yes, provide a list of times during the monitoring period the entity was unable to calculate Reporting ACE for more than 30-consecutive minutes, and proceed to the Compliance Narrative below. If No, proceed to the Compliance Narrative below.]

[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 Requested:**

<b>Provide the following evidence, or other evidence to demonstrate compliance.</b>
Evidence identifying the periods greater than 30 consecutive minutes when the entity was unable to calculate Reporting ACE, including start and stop times.
Evidence the entity notified its Reliability Coordinator within 45 minutes of the beginning of each inability to calculate Reporting ACE.

**Registered Entity Evidence (Required):**

<b>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.</b>					
<b>File Name</b>	<b>Document Title</b>	<b>Revision or Version</b>	<b>Document Date</b>	<b>Relevant Page(s) or Section(s)</b>	<b>Description of Applicability of Document</b>

**DRAFT NERC Reliability Standard Audit Worksheet**

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


**Compliance Assessment Approach Specific to BAL-005-1, R2**

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

	Verify the entity identified all periods greater than 30-consecutive minutes when the entity was unable to calculate Reporting ACE (e.g. loss of EMS, loss of communications to RTU providing scan rate values for Tie-Lines, Pseudo-Ties and Dynamic Schedules).
	Verify the entity notified its Reliability Coordinator within 45 minutes of the beginning of each inability to calculate Reporting ACE.
<b>Note to Auditor:</b>	

**Auditor Notes:**

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**R3 Supporting Evidence and Documentation**

**R3.** Each Balancing Authority shall use frequency metering equipment for the calculation of Reporting ACE:

- 3.1.** with a minimum availability of 99.95% for each calendar year; and,
- 3.2.** with a minimum accuracy of 0.001 Hz.

**M3.** The Balancing Authority shall have evidence such as dated documents or other evidence in hard copy or electronic format showing the frequency metering equipment used for the calculation of Reporting ACE had a minimum availability of 99.95% for each calendar year and had a minimum accuracy of 0.001 Hz to demonstrate compliance with Requirement R4.

**Registered Entity Response (Required):**

**Question:** During the monitoring period, were there any times when frequency metering equipment for the calculation of Reporting ACE was unavailable?     Yes     No

[If Yes, provide a list of times during the monitoring period when frequency metering equipment for the calculation of Reporting ACE was unavailable, and proceed to the Compliance Narrative below. If No, proceed to the Compliance Narrative below.]

[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 Requested<sup>1</sup>:**

<b>Provide the following evidence, or other evidence to demonstrate compliance.</b>
Evidence identifying all frequency metering equipment used for the calculation of Reporting ACE.
Evidence identifying all periods the frequency metering equipment used for the calculation of Reporting ACE was unavailable.
Evidence demonstrating the accuracy of all the frequency metering equipment used for the calculation of Reporting ACE.

**Registered Entity Evidence (Required):**

<b>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.</b>					
<b>File Name</b>	<b>Document Title</b>	<b>Revision or Version</b>	<b>Document Date</b>	<b>Relevant Page(s) or Section(s)</b>	<b>Description of Applicability of Document</b>



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


**Compliance Assessment Approach Specific to BAL-005-1, R3**

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

	Verify the entity identified all frequency metering equipment used for the calculation of Reporting ACE.
	Verify the entity used frequency metering equipment for the calculation of Reporting ACE with a minimum availability of 99.95% for each calendar year.
	Verify the entity used frequency metering equipment for the calculation of Reporting ACE with a minimum accuracy of 0.001 Hz.

**Note to Auditor:**

**Auditor Notes:**

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**R4 Supporting Evidence and Documentation**

- R4.** The Balancing Authority shall make available to the operator information associated with Reporting ACE including quality flags indicating missing or invalid data.
  
- M4.** Each Balancing Authority Area shall have evidence such as a graphical display or dated alarm log that provides indication of data validity for the real-time Reporting ACE based on both the calculated result and all of the associated inputs therein.

**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<sup>1</sup>:**

<b>Provide the following evidence, or other evidence to demonstrate compliance.</b>
Evidence that information associated with Reporting ACE has quality flags indicating missing or invalid data based on both the calculated result and all of the associated inputs therein.
Evidence that information associated with Reporting ACE including quality flags are made available to the operator.

**Registered Entity Evidence (Required):**

<b>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.</b>					
File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

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


**Compliance Assessment Approach Specific to BAL-005-1, R4**

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

	Verify that information associated with Reporting ACE has quality flags indicating missing or invalid data.
	Verify the information associated with Reporting ACE, including quality flags, are made available to the operator.

**DRAFT** NERC Reliability Standard Audit Worksheet

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**Note to Auditor:**

**Auditor Notes:**

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**R5 Supporting Evidence and Documentation**

**R5.** Each Balancing Authority’s system used to calculate Reporting ACE shall have a minimum availability of 99.5% for each calendar year.

**M5.** Each Balancing Authority will have dated documentation demonstrating that the system necessary to calculate Reporting ACE has a minimum availability of 99.5% for each calendar year. Acceptable evidence may include historical data, dated archive files; or data from other databases, spreadsheets, displays that demonstrate compliance.

**Registered Entity Response (Required):**

**Question:** During the monitoring period, were there any times when the system used to calculate Reporting ACE was unavailable?      Yes    No

[If Yes, provide a list of times during the monitoring period when the system used to calculate Reporting ACE was unavailable, and proceed to the Compliance Narrative below. If No, proceed to the Compliance Narrative below.]

[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 Requested:**

<b>Provide the following evidence, or other evidence to demonstrate compliance.</b>
Evidence identifying the system used to calculate Reporting ACE.
Evidence identifying all periods the entity’s system used to calculate Reporting ACE was unavailable.

**Registered Entity Evidence (Required):**

**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

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

**DRAFT NERC Reliability Standard Audit Worksheet**


**Compliance Assessment Approach Specific to BAL-005-1, R5**

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

	Verify the entity identified all periods the system used to calculate Reporting ACE was unavailable.
	Verify the system used to calculate Reporting ACE had a minimum availability of 99.5% for each calendar year.

**Note to Auditor:**

**Auditor Notes:**

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**R6 Supporting Evidence and Documentation**

**R6.** Each Balancing Authority that is within a multi-Balancing Authority Interconnection shall implement an Operating Process to identify and mitigate errors affecting the accuracy of scan-rate data used in the calculation of Reporting ACE for each Balancing Authority Area.

**M6.** Each Balancing Authority shall have a current Operating Process meeting the provisions of Requirement R7 and evidence to show that the process was implemented, such as dated communications or incorporation in System Operator task verification.

**Registered Entity Response (Required):**

**Question:** Is the entity’s Balancing Authority Area within a multi-Balancing Authority Interconnection?

Yes  No

[If Yes, proceed to the Compliance Narrative below. If No, this requirement is not applicable.]

[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 Requested:**

<b>Provide the following evidence, or other evidence to demonstrate compliance.</b>
Operating Process document to identify and mitigate errors affecting the accuracy of scan-rate data used in the calculation of Reporting ACE.
Evidence demonstrating implementation of the Operating Process

**Registered Entity Evidence (Required):**

<b>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.</b>					
File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

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

**DRAFT NERC Reliability Standard Audit Worksheet**


**Compliance Assessment Approach Specific to BAL-005-1, R6**

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

	Verify the entity has an Operating Process document for errors affecting the accuracy of scan-rate data used in the calculation of Reporting ACE for each Balancing Authority Area.
	Verify the Operating Process includes identification of errors affecting the accuracy of scan-rate data used in the calculation of Reporting ACE for each Balancing Authority Area.
	Verify the Operating Process includes mitigation of errors affecting the accuracy of scan-rate data used in the calculation of Reporting ACE for each Balancing Authority Area.
	Verify the Operating Process was implemented.

**Note to Auditor:**

**Auditor Notes:**

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**R7 Supporting Evidence and Documentation**

- R7.** Each Balancing Authority shall ensure that each Tie-Line, Pseudo-Tie, and Dynamic Schedule with an Adjacent Balancing Authority is equipped with:
- 7.1.** a common source to provide information to both Balancing Authorities for the scan rate values used in the calculation of Reporting ACE; and,
  - 7.2.** a time synchronized common source to determine hourly megawatt-hour values agreed-upon to aid in the identification and mitigation of errors.
- M7.** The Balancing Authority shall have dated evidence such as voice recordings or transcripts, operator logs, electronic communications, or other equivalent evidence that will be used to demonstrate a common source for the components used in the calculation of Reporting ACE with its Adjacent Balancing Authority.

**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<sup>1</sup>:**

<b>Provide the following evidence, or other evidence to demonstrate compliance.</b>
Evidence identifying all Tie-Lines, Pseudo-Ties, and Dynamic Schedules with Adjacent Balancing Authorities.
Evidence that each entity is equipped with a common source to provide information to both Balancing Authorities for the scan rate values used in the calculation of Reporting ACE.
Evidence that each entity is equipped with a time synchronized common source to determine hourly megawatt-hour values agreed-upon to aid in the identification and mitigation of errors.

**Registered Entity Evidence (Required):**

<b>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.</b>					
File Name	Document Title	Revision or Version	Document Date	Relevant Page(s) or Section(s)	Description of Applicability of Document

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




**Compliance Assessment Approach Specific to BAL-005-1, R7**

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

	Verify the entity has identified all Tie-Lines, Pseudo-Ties, and Dynamic Schedules with Adjacent Balancing Authorities.
	Verify that the entity is equipped with a common source to provide information to both Balancing Authorities for the scan rate values used in the calculation of Reporting ACE.
	Verify that the entity is equipped with a time synchronized common source to determine hourly megawatt-hour values agreed-upon to aid in the identification and mitigation of errors.
<b>Note to Auditor:</b>	

**Auditor Notes:**

DRAFT

**Additional Information:**

**Reliability Standard**

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

The full text of STD-OXX-N may be found on the NERC Web Site ([www.nerc.com](http://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 [Developer to ensure RSAW has been provided to NERC Legal for links to appropriate Regulatory Language – See example below]**

E.g. FERC Order No. 742 paragraph 34: “Based on NERC’s.....”

E.g. FERC Order No. 742 Paragraph 55, Commission Determination: “We affirm NERC’s.....”

**Selected Glossary Terms [If developer deems applicable]**

The following Glossary terms are provided for convenience only. Please refer to the NERC web site for the current enforceable terms.

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**DRAFT** NERC Reliability Standard Audit Worksheet

**Revision History for RSAW**

<b>Version</b>	<b>Date</b>	<b>Reviewers</b>	<b>Revision Description</b>
1	08/13/2015	NERC Compliance Assurance, RSAW Task Force, Standards Drafting Team	New Document. Draft RSAW posted with draft Reliability Standard – Posting 30 July 2015.
2	11/24/2015	NERC Compliance Assurance, RSAW Task Force, Standards Drafting Team	Revised in accordance with draft Reliability Standard – Posting 10 November 2015.

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