

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

# BAL-001-2 – Real Power Balancing Control Performance

***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-2):** | 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** | **PA/PC** | **RC** | **RP** | **RRSG** | **RSG** | **TO** | **TOP** | **TP** | **TSP** |
| **R1** | X |  |  |  |  |  |  | X**[[3]](#footnote-3)** |  |  |  |  |  |
| **R2** | X |  |  |  |  |  |  | X3 |  |  |  |  |  |

**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 |

Findings

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

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

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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.** The Responsible Entity shall operate such that the Control Performance Standard 1 (CPS1), calculated in accordance with Attachment 1, is greater than or equal to 100 percent for the applicable Interconnection in which it operates for each preceding 12 consecutive calendar month period, evaluated monthly.

**M1.** The Responsible Entity shall provide evidence, upon request, such as dated calculation output from spreadsheets, system logs, software programs, or other evidence (either in hard copy or electronic format) to demonstrate compliance with Requirement R1.

**Registered Entity Response (Required):**

**Question:** Is the entity providing or receiving Overlap Regulation Service, or a member of a Regulation Reserve Sharing Group (RRSG)? **[[4]](#footnote-4)**  Yes  No

If yes, provide evidence of the Overlap Regulation Service or RRSG membership. 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[[5]](#endnote-1):

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| --- |
| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Provide the value validated by the ERO for the entity’s Frequency Bias Setting as determined in BAL-003. |
| Evidence the entity is utilizing the appropriate Ɛ1I and Frequency Bias Setting in its CPS1 calculation. |
| CPS1, CF12-month and CFmonth values calculated during the monitoring period (as sampled by the audit team). |

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** |
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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 BAL-001-2, R1

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

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|  | Verify the entity is using the appropriate values for Frequency Bias and Ɛ1I in the calculation of compliance factor (CF). |
|  | Verify the CPS1, CF12-month and CFmonth values calculated during the monitoring period were calculated in accordance with Attachment 1. (sample using professional judgement) |
|  | Verify the CPS1 values were greater than or equal to 100 percent for each preceding 12 consecutive calendar month period during the monitoring period. |
|  | If the entity is providing Overlap Regulation Service, verify it calculated CPS1 performance after combining its Reporting ACE and Frequency Bias Settings with the Reporting ACE and Frequency Bias Settings of the Balancing Authority receiving the Regulation Service. |
| **Note to Auditor:** | |

Auditor Notes:

R2 Supporting Evidence and Documentation

**R2.** Each Balancing Authority shall operate such that its clock-minute average of Reporting ACE does not exceed its clock-minute Balancing Authority ACE Limit (BAAL) for more than 30 consecutive clock-minutes, calculated in accordance with Attachment 2, for the applicable Interconnection in which the Balancing Authority operates.

**M2.** Each Balancing Authority shall provide evidence, upon request, such as dated calculation output from spreadsheets, system logs, software programs, or other evidence (either in hard copy or electronic format) to demonstrate compliance with Requirement R2.

**Registered Entity Response (Required):**

**Question:** Is the entity providing or receiving Overlap Regulation Service?  Yes  No

If yes, provide evidence of the Overlap Regulation Service. 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 Requestedi:

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| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Evidence demonstrating the value for the entity’s Frequency Bias Setting as determined in BAL-003. |
| Evidence the entity is utilizing the appropriate Ɛ1I and Frequency Bias Setting in its BAAL performance calculations. |
| Evidence of the BAALLow and BAALHigh values calculated during the monitoring period (as sampled by the audit team). |

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 BAL-001-2, R2

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

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|  | Verify the entity is using the appropriate value Ɛ1I in the calculation of FTLLow and FTLHigh. |
|  | Verify the entity is using the appropriate value for Frequency Bias in the calculation of BAALLow and BAALHigh. |
|  | Verify the calculations of BAALLow and BAALHigh were performed in accordance with Attachment 2. (sample using professional judgement) |
|  | Utilize sampling of data to verify the clock-minute average of Reporting ACE did not exceed its clock-minute BAAL for more than 30 consecutive clock-minutes during the monitoring period. |
|  | If the entity is providing Overlap Regulation Service, verify it calculated BAAL performance after combining its Frequency Bias Setting with the Frequency Bias Setting of the Balancing Authority receiving the Regulation Service. |
| **Note to Auditor:** | |

Auditor Notes:

Additional Information:



Reliability Standard

The full text of BAL-001-2 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 an associated document, “Real Power Balancing Control Performance Standard Background Document”, 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

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

*North American Electric Reliability Corp.*, Real Power Balancing Control Performance Reliability Standard

Docket No. RM14-10-000 (April 16, 2015) (Order 810).

Page 1-2. The Commission approved Reliability Standard BAL-001-2 (Real Power Balancing Control Performance). Reliability Standard BAL-001-2 applies to balancing authorities and Regulation Reserve Sharing Groups, and is intended to ensure that Interconnection frequency is maintained within predefined

frequency limits. The Commission also found that Reliability Standard BAL-001-2 addresses the Commission’s directive set forth in Order No. 693 pertaining to BAL-002-0. The Commission approved the retirement of currently-effective Reliability Standard BAL-001-1 immediately prior to the effective date of Reliability Standard BAL-001-2.

Page 4-5. On April 2, 2014, NERC filed a petition seeking approval of Reliability Standard BAL-001-2, four new definitions to be added to the NERC Glossary and the associated violation risk factors and violation severity levels, effective date, and implementation plan. In its petition, NERC explained that balancing generation and load is necessary to ensure that system frequency is maintained within narrow bounds based on a scheduled

value. NERC stated that the purpose of Reliability Standard BAL-001-2 is to maintain Interconnection frequency within predefined frequency limits and that the Reliability Standard improves reliability by adding a frequency component to the measurement of a Balancing Authority’s ACE and allows for the formation of Regulation Reserve Sharing Groups. Also, NERC asserted that Reliability Standard BAL-001-2 addresses the Commission’s Order No. 693 directive pertaining to Reliability Standard BAL-002-0.

Page 5. Proposed Reliability Standard BAL-001-2 has two requirements and two attachments containing the mathematical equations for calculating the Control Performance Standard 1 (CPS1) in Requirement R1, the Balancing Authority ACE Limit in Requirement R2, and associated measures. The only proposed change to Requirement R1 was to move the equation and explanation of the individual components of CPS1 to Attachment 1.

Page 5-6. Proposed Requirement R2 was new and replaces the existing Control Performance Standard 2 requirement. The current Reliability Standard BAL-001-1 Requirement R2 requires each balancing authority to operate such that for at least 90 percent of the ten-minute periods in a calendar month (using six non-overlapping periods per hour), the average ACE must be within a specific limit, referred to as L10. The Balancing Authority ACE Limits are unique for each balancing authority and provide dynamic limits for the balancing authority’s ACE value as a function of its Interconnection frequency.

Page 11. The Commission determined that the Reliability Standard will help ensure that Interconnection frequency is maintained through both long and short term performance measures for Interconnection frequency control and dynamic (i.e., real-time) limits that are specific for each balancing authority and Interconnection. The Commission found that by basing Balancing Authority ACE Limits on predefined frequency trigger limits for each Interconnection, the real-time measurements established in the Reliability Standard will help ensure that the Interconnection frequency returns to a reliable state should a balancing authority’s ACE, or the Interconnection’s frequency, exceed acceptable bounds.

Revision History for RSAW

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| --- | --- | --- | --- |
| **Version** | **Date** | **Reviewers** | **Revision Description** |
| 1 | 05/13/16 | NERC Compliance Assurance, RSAW Task Force | 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-1)
2. Compliance Assessment Date(s): The date(s) the actual compliance assessment (on-site audit, off-site spot check, etc.) occurs. [↑](#footnote-ref-2)
3. Regulation Reserve Sharing Group (RRSG) is a new defined term that becomes effective when BAL-001-2 becomes effective. [↑](#footnote-ref-3)
4. Regulation Reserve Sharing Group (RRSG) is a new defined term that becomes effective when BAL-001-2 becomes effective. [↑](#footnote-ref-4)
5. 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-1)