

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

**TOP-007-WECC-1— System Operating Limits**

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

|  |  |
| --- | --- |
| **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** | **IA** | **LSE** | **PA** | **PSE** | **RC** | **RP** | **RSG** | **TO** | **TOP** | **TP** | **TSP** |
| **R1** |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |
| **R2** |  |  |  |  |  |  |  |  |  |  |  |  | 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 |

**Findings Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Req.** | **Finding** | **Summary & Documentation** | **Functions Monitored** |
| [**R****1.**](#R1_Summary) |  |  | TOP |
| [**R****2.**](#R2_Summary) |  |  | TOP |

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| --- | --- |
| **Req.** | **Recommendations** |
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| --- | --- |
| **Req.** | **Areas of Concern** |
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# **Subject Matter Experts**

Identify subject matter expert(s) responsible for this Reliability Standard. Insert additional lines if necessary.

**Registered Entity Response (Required):**

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

R1. When the actual power flow exceeds an SOL for a Transmission path, the Transmission Operators shall take immediate action to reduce the actual power flow across the path such that at no time shall the power flow for the Transmission path exceed the SOL for more than 30 minutes.

Question: Do you operate any of the transmission paths listed in The Table titled “Major WECC Transfer Paths in the Bulk Electric System” (refer to Table 1 below)?

If yes, please list all such transmission paths.

If no, no further action is required.

**Registered Entity Response (Required):**

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

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 TOP-007-WECC-1 R1**

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

Review the evidence to verify the entity has the following:

|  |  |
| --- | --- |
|  | Determine if the TOP operates a transmission path listed in The Table titled “Major WECC Transfer Paths in the Bulk Electric System” (refer to **Table 1** below). If it does not, then this standard does not apply. |
|  | Verify the actual power flow on the transmission paths listed in “Major WECC Transfer Paths in the Bulk Electric System” (refer to Table 1 below), did not exceed the System Operating Limit (SOL) for more than 30 minutes.  |

[**Compliance Summa****ry:**](#R1_Finding)

(Finding Summary):

Primary Documents Supporting Finding:

**Auditor Notes:**

# **R2 Supporting Evidence and Documentation**

R2. The Transmission Operator shall not have the Net Scheduled Interchange for power flow over an interconnection or Transmission path above the path’s SOL when the Transmission Operator implements its real-time schedules for the next hour. For paths internal to a Transmission Operator Area that are not scheduled, this requirement does not apply.

R2.1. If the path SOL decreases within 20 minutes before the start of the hour, the Transmission Operator shall adjust the Net Scheduled Interchange within 30 minutes to the new SOL value. Net Scheduled Interchange exceeding the new SOL during this 30-minute period will not be a violation of R2.

**Registered Entity Response (Required):**

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

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 TOP-007-WECC-1 R2**

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

Review the evidence to verify the entity has the following:

|  |  |
| --- | --- |
|  | Determine if the TOP operates a transmission path listed in The Table titled “Major WECC Transfer Paths in the Bulk Electric System” (refer to **Table 1** below), If it does not, then this standard does not apply. |
|  |  Verify the Net Scheduled Interchange on the transmission paths listed in “Major WECC Transfer Paths in the Bulk Electric System” (refer to Table 1 below), did not exceed the System Operating Limit (SOL) when schedules were implemented for the next operating hour. |
|  | If Net Scheduled Interchange on the transmission paths listed in “Major WECC Transfer Paths in the Bulk Electric System” (refer to Table 1 below), exceeded the System Operating Limit (SOL) when schedules were implemented for the next operating hour due to a change in SOL value, Verify the schedules were modified or curtailed as necessary to satisfy the SOL within 30 minutes of the change in SOL. |

[**Compliance S****ummary:**](#R2_Finding)

(Finding Summary):

Primary Documents Supporting Finding:

**Auditor 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.

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**Table 1**

Major WECC Transfer Paths in the Bulk Electric System

Used in Standards FAC-501-WECC-1, PRC-004-WECC-1, and TOP-007-WECC-1

 (Revised September 19, 2007)

|  |  |  |
| --- | --- | --- |
|   | PATH NAME\* | Path Number |
| 1 | Alberta - British Columbia | 1 |
| 2 | Northwest - British Columbia | 3 |
| 3 | West of Cascades - North | 4 |
| 4 | West of Cascades - South | 5 |
| 5 | West of Hatwai | 6 |
| 6 | Montana to Northwest | 8 |
| 7 | Idaho to Northwest | 14 |
| 8 | South of Los Banos or Midway- Los Banos | 15 |
| 9 | Idaho - Sierra | 16 |
| 10 | Borah West | 17 |
| 11 | Idaho - Montana | 18 |
| 12 | Bridger West | 19 |
| 13 | Path C | 20 |
| 14 | Southwest of Four Corners | 22 |
| 15 | PG&E - SPP | 24 |
| 16 | Northern - Southern California | 26 |
| 17 | Intmntn. Power Project DC Line | 27 |
| 18 | TOT 1A | 30 |
| 19 | TOT 2A | 31 |
| 20 | Pavant - Gonder 230 kVIntermountain - Gonder 230 kV | 32 |
| 21 | TOT 2B | 34 |
| 22 | TOT 2C | 35 |
| 23 | TOT 3 | 36 |
| 24 | TOT 5 | 39 |
| 25 | SDGE - CFE | 45 |
| 26 | West of Colorado River (WOR) | 46 |
| 27 | Southern New Mexico (NM1) | 47 |
| 28 | Northern New Mexico (NM2) | 48 |
| 29 | East of the Colorado River (EOR) | 49 |
| 30 | Cholla - Pinnacle Peak | 50 |
| 31 | Southern Navajo | 51 |
| 32 | Brownlee East | 55 |
| 33 | Lugo - Victorville 500 kV | 61 |
| 34 | Pacific DC Intertie | 65 |
| 35 | COI | 66 |
| 36 | North of John Day cutplane | 73 |
| 37 | Alturas | 76 |
| 38 | Montana Southeast | 80 |
| 39 | SCIT\*\* |   |
| 40 | COI/PDCI - North of John Day cutplane\*\* |  |

\*For an explanation of terms, path numbers, and definition for the paths refer to WECC’s Path Rating Catalog.

\*\*The SCIT and COI/PDCI-North of John Day Cutplane are paths that are operated in accordance with nomograms identified in WECC’s Path Rating Catalog.

**Excerpts from FERC Orders -- For Reference Purposes Only**

**Updated Through April 27, 2011**

**TOP-007-WECC-1**

**FERC-752 Version One Regional Reliability Standard for Transmission Operations**

16. The Commission approves TOP-007-WECC-1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. TOP-007-WECC-1 covers topics not covered by the corresponding continent-wide Reliability Standard, TOP-007-0, thus meeting a criterion for approving a regional difference. Specifically, Requirement R1 requires the transmission operator of a major WECC transfer path to take immediate action to return the actual power flow to within SOLs such that at no time shall the power flow exceed the SOLs for longer than 30 minutes. While there is a requirement in the continent-wide Reliability Standards to report exceeding SOLs to the reliability coordinator, specifically Reliability Standard TOP-007-1, the continent-wide Reliability Standards do not have a requirement to return the transmission system to within SOLs within a time certain and thus the addition of this time limitation makes the regional standard more stringent than the continental standards. Additionally, TOP-007-WECC-1 Requirement R2 prohibits the transmission operator from having the net scheduled interchange for power flow over an interconnection or transmission path above the path’s SOL when the transmission operator implements its real-time schedules for the next hour. There is no such requirement in the continent-wide Reliability Standards. In addition to these added stringencies, the regional Reliability Standard addresses modifications directed by the Commission in the June 2007 Order. In addition, the Commission finds that the regional Reliability Standard is just and reasonable in that it is clear and unambiguous regarding what is required and who is required to comply and that it has clear and objective measures for compliances. Further, the regional Reliability Standard is in the public interest as it will serve to achieve a reliability goal, namely, that operating power flows along major paths are within not only interconnection reliability operating limits but also SOLs. For these reasons, the Commission approves TOP-007-WECC-1.

31. The Commission finds that WECC and BPA have adequately supported the change from a dual 20/30 minute time limit to a uniform 30 minute time limit for correcting SOL violations. The change eliminates possible confusion among operators. Further, the requirements of the regional Reliability Standard are consistent with the 30 minute timeframe for the transmission operator to implement corrective actions to bring the system back within IROL limits provided for in the corresponding continent-wide Reliability Standard, TOP-007-0. We also note that the corresponding continent-wide Reliability Standard, TOP-007-0, also requires that actions to mitigate the overload begin as soon as possible. Finally, no comments were received opposing the increase in response time. Accordingly, the Commission finds the revised regional Reliability Standard will not threaten reliability and can be approved as reasonable.

35. The Commission finds that WECC has adequately explained its intended use of “SOL” in TOP-007-WECC-1 as a replacement for the term “OTC” as used in TOP-STD-007-0.

43. Consistent with our NOPR proposal, WECC’s and other parties’ comments, the Commission directs WECC to file, within 60 days from the issuance of this Final Rule, WECC’s criteria for identifying and modifying major transmission paths listed in the WECC Transfer Path Table. Moreover, the Commission accepts WECC’s commitment to publicly post any revisions to the WECC Transfer Path Table on the WECC website with concurrent notification to the Commission, NERC, and industry. We believe that this process balances the interests of WECC in developing timely revisions to the WECC Transfer Path Table with the need for adequate transparency for transmission owners that are affected by changes to the WECC Transfer Path Table.

50. …Given the exposure to potential controlled separations, the Commission finds that the appropriate VRF for Requirement R1 is “high.” Accordingly, the Commission directs WECC to modify the VRF assignment to “high” and submit the modification in a compliance filing to be submitted within 120 days from the date this Final Rule issues.

51…Violations of Requirement R2 could directly affect the electrical state of the Bulk-Power System. Thus, the nature of Requirement R2 is consistent with NERC’s definition of a “medium” VRF assignment level rather than the “lower” level. Accordingly, we direct WECC to modify the VRF assignment for Requirement R2 to “medium” and submit the modification in a compliance filing to be submitted within 120 days from the date this Final Rule issues.

**Revision History**

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| --- | --- | --- |
| **Date** | **Reviewers** | **Revision Description** |
| July 2011 | Phil O’Donnell | RSAW Creation for new Regional Standard. |
| January 2013 | Mindee Hawes | Formatting Changes for 2013 |
| January 2014 | Nickole B. Radabaugh | Reviewed for format consistency and content. |
| December 2014 | WECC Compliance Staff | Updated formatting for 2015 |
| February 2015 | WECC Compliance | Removed Audit Id line from cover page |
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1. WECC developed this Reliability Standard Audit Worksheet (RSAW) language in order to facilitate WECC and the Regional Entities’ assessment of a registered entity’s compliance with this Reliability Standard. The WECC RSAW language is written to specific versions of each WECC 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 WECC 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. WECC 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 WECC 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 WECC 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)