
**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

North American Electric Reliability)
Corporation)

Docket No. _____

**JOINT PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION AND
WESTERN ELECTRICITY COORDINATING COUNCIL FOR APPROVAL OF
PROPOSED REGIONAL RELIABILITY STANDARD BAL-004-WECC-3**

Sandy Mooy
Associate General Counsel
Ruben Arredondo
Senior Legal Counsel
Steve Rueckert
Director of Standards
Western Electricity Coordinating Council
155 North 400 West, Suite 200
Salt Lake City, UT 84103
(801) 582-0353
smooy@wecc.biz
rarredondo@wecc.biz
steve@wecc.biz

Shamai Elstein
Senior Counsel
Marisa Hecht
Counsel
North American Electric Reliability Corporation
1325 G Street, N.W., Suite 600
Washington, D.C. 20005
(202) 400-3000
shamai.elstein@nerc.net
marisa.hecht@nerc.net

*Counsel for the North American Electric
Reliability Corporation*

*Counsel for the Western Electricity Coordinating
Council*

March 8, 2018

TABLE OF CONTENTS

I.	EXECUTIVE SUMMARY	2
II.	NOTICES AND COMMUNICATIONS.....	4
III.	BACKGROUND	4
A.	Regulatory Framework.....	4
B.	WECC Regional Reliability Standards Development Process	6
C.	Development of Proposed Regional Reliability Standard.....	7
IV.	JUSTIFICATION FOR APPROVAL.....	7
A.	Description and Technical Basis of Proposed Requirements.....	9
1.	WECC Interchange Tool	9
2.	Other Clarifications	10
B.	Enforceability of Proposed Regional Reliability Standard BAL-004-WECC-3.....	11
V.	EFFECTIVE DATE.....	11
VI.	CONCLUSION.....	13
Exhibit A	Proposed Regional Reliability Standard BAL-004-WECC-3 – Automatic Time Error Correction	
Exhibit B	Implementation Plan for Proposed Regional Reliability Standard BAL-004-WECC-3	
Exhibit C	Order No. 672 Criteria for Proposed Regional Reliability Standard BAL-004-WECC-3	
Exhibit D	Summary of Development History and Complete Record of Development	
Exhibit E	Standard Drafting Team Roster for Project WECC-0124 Automatic Time Error Correction Modification	

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**North American Electric Reliability
Corporation**

)
)

Docket No. _____

**JOINT PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION AND
WESTERN ELECTRICITY COORDINATING COUNCIL FOR APPROVAL OF
PROPOSED REGIONAL RELIABILITY STANDARD BAL-004-WECC-3**

Pursuant to Section 215(d)(1) of the Federal Power Act (“FPA”)¹ and Section 39.5² of the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) regulations, the North American Electric Reliability Corporation (“NERC”)³ and the Western Electricity Coordinating Council (“WECC”) hereby submit proposed regional Reliability Standard BAL-004-WECC-3 – Automatic Time Error Correction for Commission approval. Regional Reliability Standard BAL-004-WECC-3 seeks to maintain Interconnection frequency and to ensure that Time Error Corrections and Primary Inadvertent Interchange (“PII”) payback are effectively conducted in a manner that does not adversely affect the reliability of the Interconnection.

NERC requests that the Commission approve proposed regional Reliability Standard BAL-004-WECC-3 (**Exhibit A**) and find that the proposed regional Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest.⁴ NERC also requests approval of: (i) the associated Implementation Plan (**Exhibit B**) for the proposed regional

¹ 16 U.S.C. § 824o (2012).

² 18 C.F.R. § 39.5 (2017).

³ The Commission certified NERC as the electric reliability organization (“ERO”) in accordance with Section 215 of the FPA on July 20, 2006. *N. Am. Elec. Reliability Corp.*, 116 FERC ¶ 61,062 (2006) (“ERO Certification Order”).

⁴ Unless otherwise designated, all capitalized terms shall have the meaning set forth in the *Glossary of Terms Used in NERC Reliability Standards*, available at http://www.nerc.com/files/Glossary_of_Terms.pdf.

Reliability Standard; (ii) the associated Violation Risk Factors (“VRFs”) and Violation Severity Levels (“VSLs”) (**Exhibits A and C**); and (iii) the retirement of existing regional Reliability Standard BAL-004-WECC-2. The NERC Board of Trustees adopted proposed regional Reliability Standard BAL-004-WECC-3 on February 8, 2018.

As required by Section 39.5(a)⁵ of the Commission’s regulations, this petition presents the technical basis and purpose of proposed regional Reliability Standard BAL-004-WECC-3; a demonstration that the proposed regional Reliability Standard meets the criteria identified by the Commission in Order No. 672⁶ (**Exhibit C**); and a summary of the development history (**Exhibit D**).

I. EXECUTIVE SUMMARY

The purpose of proposed regional Reliability Standard BAL-004-WECC-3 is to maintain Interconnection frequency and to ensure that Time Error Corrections and PII payback are effectively conducted in a manner that does not adversely affect the reliability of the Western Interconnection. Proposed regional Reliability Standard BAL-004-WECC-3 includes requirements that address the following: limits on the maximum accumulated PII; the deadline for correcting an error in PII; keeping Automatic Time Error Correction (“ATEC”) in service with allowable exceptions; calculating hourly PII, accumulated PII, and ATEC; changing Automatic Generation Control operating modes to correspond to current operating conditions; recalculating the hourly PII and accumulated PII whenever adjustments are made to hourly Inadvertent

⁵ 18 C.F.R. § 39.5(a) (2017).

⁶ The Commission specified in Order No. 672 certain general factors it would consider when assessing whether a particular Reliability Standard is just and reasonable. *See Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, at P 262, 321-37, *order on reh’g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006) (“Order No. 672”).

Interchange; adjusting accumulated PII based on any month-end meter reading adjustments to Inadvertent Interchange; and using ATEC for Inadvertent Interchange payback.

Proposed regional Reliability Standard BAL-004-WECC-3 improves upon the existing standard by referencing the WECC Interchange Tool (“WIT”) and refining language in Requirement R1, as explained further below. Requiring Balancing Authorities operating synchronously in WECC to operate to centralized calculations of accumulated PII made in the WIT or successor electronic tool provides clarity on the source data. WECC also changed the action required of Balancing Authorities from “verify” to “operate its system” in Requirement R1. In addition, WECC restructured the language of Requirement R1 to comport with the revised action. Development of the proposed standard followed Commission-approved standards development processes and included subject matter experts with experience in Balancing Authority operations in the Western Interconnection.

NERC and WECC respectfully request the Commission approve proposed regional Reliability Standard BAL-004-WECC-3, the associated VRFs and VSLs, the Implementation Plan, and the retirement of the existing regional Reliability Standard BAL-004-WECC-2. The following petition presents the justification for approval and supporting documentation.

II. NOTICES AND COMMUNICATIONS

Notices and communications with respect to this filing may be addressed to the following:⁷

Sandy Mooy*
Associate General Counsel
Ruben Arredondo*
Senior Legal Counsel
Steve Rueckert*
Director of Standards
Western Electricity Coordinating Council
155 North 400 West, Suite 200
Salt Lake City, UT 84103
(801) 582-0353
smooy@wecc.biz
raredondo@wecc.biz
steve@wecc.biz

Shamai Elstein*
Senior Counsel
Marisa Hecht*
Counsel
North American Electric Reliability Corporation
1325 G Street, N.W., Suite 600
Washington, D.C. 20005
(202) 400-3000
shamai.elstein@nerc.net
marisa.hecht@nerc.net

*Counsel for the North American Electric
Reliability Corporation*

*Counsel for the Western Electricity Coordinating
Council*

III. BACKGROUND

The following background information is provided below: (a) an explanation of the regulatory framework for NERC and regional Reliability Standards; (b) an explanation of the WECC Regional Reliability Standards development process; and (c) the history of Project WECC-0124 BAL-004-WECC-3 Automatic Time Error Correction Modification.

A. Regulatory Framework

By enacting the Energy Policy Act of 2005,⁸ Congress entrusted the Commission with the duties of approving and enforcing rules to ensure the reliability of the Nation's Bulk-Power System, and with the duties of certifying an ERO that would be charged with developing and

⁷ Persons to be included on the Commission's service list are identified by an asterisk. NERC respectfully requests a waiver of Rule 203 of the Commission's regulations, 18 C.F.R. § 385.203 (2017), to allow the inclusion of more than two persons on the service list in this proceeding.

⁸ 16 U.S.C. § 824o (2012).

enforcing mandatory Reliability Standards, subject to Commission approval. Section 215(b)(1)⁹ of the FPA states that all users, owners, and operators of the Bulk-Power System in the United States will be subject to Commission-approved Reliability Standards. Section 215(d)(5)¹⁰ of the FPA authorizes the Commission to order the ERO to submit a new or modified Reliability Standard. Section 39.5(a)¹¹ of the Commission's regulations requires the ERO to file with the Commission for its approval each Reliability Standard that the ERO proposes should become mandatory and enforceable in the United States, and each modification to a Reliability Standard that the ERO proposes should be made effective.

The Commission has the regulatory responsibility to approve Reliability Standards that protect the reliability of the Bulk-Power System and to ensure that such Reliability Standards are just, reasonable, not unduly discriminatory or preferential, and in the public interest. Pursuant to Section 215(d)(2) of the FPA¹² and Section 39.5(c)¹³ of the Commission's regulations, the Commission will give due weight to the technical expertise of the ERO with respect to the content of a Reliability Standard.

Similarly, the Commission approves regional Reliability Standards proposed by Regional Entities if the regional Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest.¹⁴ In addition, Order No. 672 requires further criteria for regional Reliability Standards. A regional difference from a continent-wide Reliability Standard must either be: (1) more stringent than the continent-wide Reliability Standard, or (2) necessitated

⁹ *Id.* § 824o(b)(1).

¹⁰ *Id.* § 824o(d)(5).

¹¹ 18 C.F.R. § 39.5(a) (2017).

¹² 16 U.S.C. § 824o(d)(2).

¹³ 18 C.F.R. § 39.5(c)(1).

¹⁴ Section 215(d)(2) of the FPA and 18 C.F.R. §39.5(a).

by a physical difference in the Bulk-Power System.¹⁵ The Commission must give due weight to the technical expertise of a Regional Entity, like WECC, that is organized on an Interconnection-wide basis with respect to a regional Reliability Standard to be applicable within that Interconnection.¹⁶

B. WECC Regional Reliability Standards Development Process

The proposed regional Reliability Standard was developed in an open and fair manner and in accordance with the Commission-approved WECC Reliability Standards Development Procedures.¹⁷ In accepting NERC's delegation agreements with the Regional Entities, the Commission found that NERC's proposed common attributes for regional Reliability Standard development and WECC's Reliability Standards Development process provide for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing Reliability Standards and thus addresses certain of the criteria for approving Reliability Standards.¹⁸ The development process is open to any person or entity that is an interested stakeholder. WECC considers the comments of all stakeholders, and a vote of stakeholders and the WECC Board of Directors is required to approve a WECC regional Reliability Standard. Once the standard is approved by the WECC Board of Directors, NERC posts the approved regional Reliability Standard for an additional comment period. Then the NERC Board of Trustees must adopt the regional Reliability Standard before the regional Reliability Standard is submitted to the Commission for approval.

¹⁵ *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, at P 291, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

¹⁶ Order No. 672 at P 344.

¹⁷ *N. Am. Elec. Reliability Corp.*, Docket No. RR17-5-000 (Oct. 27, 2017) (unpublished letter order) (approving revised WECC Reliability Standards Development Procedures), *available at* <http://www.nerc.com/FilingsOrders/us/FERCOOrdersRules/Delegated%20Order%20Approving%20WECC%20RSD%20RR17-5.pdf>. The WECC Reliability Standards Development Procedures are available at <https://www.wecc.biz/Reliability/WECC%20Reliability%20Standards%20Development%20Procedures%20-%20FERC%20Approved%20October%2027%202017.pdf>.

¹⁸ *Order Accepting ERO Compliance Filing, Accepting ERO/Regional Entity Delegation Agreements, and Accepting Regional Entity 2007 Business Plans*, 119 FERC ¶ 61,060 at P 17 (2007).

C. Development of Proposed Regional Reliability Standard

As further described in Exhibit D hereto, proposed regional Reliability Standard BAL-004-WECC-3 was developed as part of an effort to improve upon regional Reliability Standard BAL-004-WECC-2, through a project entitled WECC-0124 Automatic Time Error Correction Modification. On August 28, 2017, the fourth and final draft of proposed regional Reliability Standard BAL-004-WECC-3 received the requisite approval from the registered ballot body, with a weighted approval of 97.6 percent. The WECC Board of Directors approved the standard on December 6, 2017 and submitted the proposed standard to the NERC Board of Trustees for adoption. NERC posted the proposed standard for a 45-day comment period concluding on January 16, 2018. There were no additional changes after this comment period. The NERC Board of Trustees adopted the standard on February 8, 2018.

IV. JUSTIFICATION FOR APPROVAL

As discussed in detail in Exhibit C, proposed regional Reliability Standard BAL-004-WECC-3 – Automatic Time Error Correction is just, reasonable, not unduly discriminatory or preferential, and in the public interest. As described more fully herein and in Exhibit C, the proposed regional Reliability Standard provides reliability benefits for the Bulk-Power System in the WECC region.

As noted in previous petitions, ATEC reduces manual Time Error Corrections, reduces accumulated Inadvertent Interchange, and better identifies the Balancing Authorities responsible for the Inadvertent Interchange.¹⁹ Interconnections aim to operate at a frequency of 60 Hertz

¹⁹ *Joint Petition of the North American Electric Reliability Corporation and Western Electricity Coordinating Council for Approval of BAL-004-WECC-02 and BAL-001-1*, Docket No. RD13-11-000 (Aug. 20, 2013) at 6-7 (“BAL-004-WECC-2 Petition”); *Petition of the North American Electric Reliability Corporation for Approval of One Proposed Western Electricity Coordinating Council Regional Reliability Standard Regarding Automatic Time Error Correction and Three Definitions*, Docket No. RM08-12-000 (July 29, 2008) at 8.

("Hz"). However, over time the average frequency may be above or below 60 Hz, resulting in Time Error.²⁰ This discrepancy in frequency results from a load-interchange-generation imbalance, which also causes Inadvertent Interchange.²¹ Time Error Correction is "the procedure Reliability Coordinators and Balancing Authorities follow to reduce Time Error and regulate the average frequency closer to 60 Hz."²² Manual Time Error Correction performs this offset to the frequency schedule as requested by an Interconnection time monitor, whereas ATEC performs this offset continuously within each WECC Balancing Authority's Area Control Error equation. As a result, ATEC helps to ensure Inadvertent Interchange payback occurs closer in time to the frequency imbalance, thus helping to reduce Time Error, the need for manual Time Error Corrections, and accumulated Inadvertent Interchange.

The purpose of proposed regional Reliability Standard BAL-004-WECC-3 is to maintain Interconnection frequency and to ensure that Time Error Corrections and PII payback are effectively conducted in a manner that does not adversely affect the reliability of the Interconnection. The proposed regional Reliability Standard achieves this purpose by requiring Balancing Authorities operating synchronously in the Western Interconnection to automatically correct for time error to reduce manual Time Error Corrections and help ensure payback of the difference between the Net Actual Interchange and the Net Scheduled Interchange occurs among Balancing Authorities. The provisions of the proposed standard provide for a quicker and more

²⁰ The *Glossary of Terms Used in NERC Reliability Standards* ("*NERC Glossary*") defines "Time Error" as "[t]he difference between the Interconnection time measured at the Balancing Authority(ies) and the time specified by the National Institute of Standards and Technology. Time error is caused by the accumulation of Frequency Error over a given period."

²¹ The *NERC Glossary* defines "Inadvertent Interchange" as "[t]he difference between the Balancing Authority's Net Actual Interchange and Net Scheduled Interchange."

²² BAL-004-WECC-2 Petition at 7; the *NERC Glossary* defines "Time Error Correction" as "[a]n offset to the Interconnection's scheduled frequency to return the Interconnection's Time Error to a predetermined value."

accurate adjustment of interchange by better identifying the Balancing Authorities responsible for the Inadvertent Interchange.

The proposed standard includes requirements for the maximum limit of accumulated PII for the end of each month (Requirement R1); the deadline for correcting an error in the calculation of the hourly PII and adjusting the accumulated PII (Requirement R2); keeping ATEC in service with allowable exceptions (Requirement R3); calculating hourly PII, accumulated PII, and ATEC using the WIT or its successor tool (Requirement R4); the ability for Balancing Authorities to change Automatic Generation Control operating modes to correspond to current operating conditions (Requirement R5); recalculating the hourly PII and accumulated PII whenever adjustments are made to hourly Inadvertent Interchange (Requirement R6); adjusting accumulated PII based on any month-end meter reading adjustments to Inadvertent Interchange (Requirement R7); and using ATEC for Inadvertent Interchange payback (Requirement R8).

This section of the petition addresses: (a) the description and technical basis of the proposed requirements; and (b) the enforceability of the proposed standard.

A. Description and Technical Basis of Proposed Requirements

Proposed regional Reliability Standard BAL-004-WECC-3 revises the existing requirements in regional Reliability Standard BAL-004-WECC-2 to reference the WIT, or its successor electronic confirmation tool, throughout the requirements. The proposed modifications are also designed to improve upon the language of BAL-004-WECC-2 by providing additional clarity and specificity.

1. WECC Interchange Tool

Proposed regional Reliability Standard BAL-004-WECC-3 references the WIT or its successor electronic confirmation tool in Requirements R1 and R4 as well as the measures. The WIT is a software system that facilitates and coordinates interchange between Balancing

Authorities in the WECC region and permits increased monitoring of interchange transactions by Reliability Coordinators. Proposed Requirement R1 clarifies that accumulated PII is calculated using WIT to ensure that it is less than or equal to 150% of either the previous calendar year's integrated hourly Peak Demand for load-serving Balancing Authorities or peak generation for generation-only Balancing Authorities. Currently-effective BAL-004-WECC-2 allows for other forms of calculating accumulated PII so the proposed change provides additional specificity. Proposed Requirement R4 requires each Balancing Authority to compute its hourly PII, accumulated PII, and ATEC using WIT no later than 50 minutes after each hour. Requiring entities to use a common tool to reconcile accumulations of PII provides consistency across the Western Interconnection and reduces invalid implementation of ATEC. WECC revised the measures language to incorporate WIT in example evidence.

2. Other Clarifications

The proposed regional Reliability Standard BAL-004-WECC-3 includes clarifications that improve upon the existing standard. In Requirement R1, WECC changed the verb “verify” to “operate its system” to describe the action required of Balancing Authorities. With the verb “verify,” entities were required to check at the end of the month that the PII met Requirement R1. With “operate its system,” WECC intends that entities are required to take proactive steps to ensure their system meets Requirement R1 during operation rather than only view its performance after-the-fact. This change promotes a more precise operation of the system. In addition, WECC restructured the language of Requirement R1 based on the revised verb. WECC moved the clause “following the conclusion of each month” within Requirement R1 to indicate that the system should be operated so that the value of the Accumulated PII should be the value required by the standard following the conclusion of each month. Finally, WECC made other non-substantive changes to the standard by rewording “monthly On Peak period and the monthly Off Peak period”

to “month-end absolute value of its On-Peak and Off-Peak, Accumulated [PII].” These revisions enhance the clarity and unambiguity of proposed regional Reliability Standard BAL-004-WECC-3. Finally, WECC relocated the background section from the beginning of the Reliability Standard to the Guidelines and Technical Basis Section.

B. Enforceability of Proposed Regional Reliability Standard BAL-004-WECC-3

The proposed regional Reliability Standard includes VRFs and VSLs that are unchanged from BAL-004-WECC-2. The VSLs provide guidance on the way that NERC will enforce the requirements of the proposed regional Reliability Standard. The VRFs are one of several elements used to determine an appropriate sanction when the associated requirement is violated. The VRFs assess the impact to reliability of violating a specific requirement. The VRFs and VSLs for the proposed regional Reliability Standard comport with NERC and Commission guidelines related to their assignment.

The proposed regional Reliability Standard also includes measures that support each requirement by clearly identifying what is required and how the requirement will be enforced. These measures help ensure that the requirements will be enforced in a clear, consistent, and non-preferential manner and without prejudice to any party.²³

V. EFFECTIVE DATE

NERC respectfully requests that the Commission approve the proposed regional Reliability Standard BAL-004-WECC-3 and the retirement of BAL-004-WECC-2 to become effective as set forth in the proposed Implementation Plan, provided in Exhibit B hereto. The proposed Effective

²³ Order No. 672 at P 327 (“There should be a clear criterion or measure of whether an entity is in compliance with a proposed Reliability Standard. It should contain or be accompanied by an objective measure of compliance so that it can be enforced and so that enforcement can be applied in a consistent and non-preferential manner.”).

Date of the proposed regional Reliability Standard is the first day of the second quarter following applicable regulatory approval.

VI. CONCLUSION

For the reasons set forth above, NERC respectfully requests that the Commission approve:

- the proposed regional Reliability Standard BAL-004-WECC-3 in **Exhibit A**;
- the other associated elements in the regional Reliability Standard in **Exhibit A**, including the VRFs and VSLs (**Exhibits A and C**);
- the retirement of existing regional Reliability Standard BAL-004-WECC-2; and
- the Implementation Plan, included in **Exhibit B**.

Respectfully submitted,

/s/ Marisa Hecht

Sandy Mooy
Associate General Counsel
Ruben Arredondo
Senior Legal Counsel
Steve Rueckert
Director of Standards
Western Electricity Coordinating Council
155 North 400 West, Suite 200
Salt Lake City, UT 84103
(801) 582-0353
smooy@wecc.biz
raredondo@wecc.biz
steve@wecc.biz

*Counsel for the Western Electricity
Coordinating Council*

Date: March 8, 2018

Shamai Elstein
Senior Counsel
Marisa Hecht
Counsel
North American Electric Reliability Corporation
1325 G Street, N.W., Suite 600
Washington, D.C. 20005
(202) 400-3000
shamai.elstein@nerc.net
marisa.hecht@nerc.net

*Counsel for the North American Electric
Reliability Corporation*