

November 14, 2016

**VIA ELECTRONIC FILING**

David Erickson  
President and Chief Executive Officer  
Alberta Electric System Operator  
2500, 330 - 5 Avenue SW  
Calgary, Alberta  
T2P 0L4

RE: *North American Electric Reliability Corporation*

Dear Mr. Erickson:

The North American Electric Reliability Corporation hereby submits Notice of Filing of the North American Electric Reliability Corporation of Interpretation of Regional Reliability Standard BAL-002-WECC-2a. NERC requests, to the extent necessary, a waiver of any applicable filing requirements with respect to this filing.

NERC understands the AESO may adopt the proposed reliability standards subject to Alberta legislation, principally as established in the *Transmission Regulation* (“the T Reg.”). Briefly, it is NERC’s understanding that the T Reg. requires the following with regard to the adoption in Alberta of a NERC Reliability Standard:

1. The AESO must consult with those market participants that it considers are likely to be directly affected.
2. The AESO must forward the proposed reliability standards to the Alberta Utilities Commission for review, along with the AESO’s recommendation that the Commission approve or reject them.
3. The Commission must follow the recommendation of the AESO that the Commission approve or reject the proposed reliability standards unless an interested person satisfies the Commission that the AESO’s recommendation is “technically deficient” or “not in the public interest.”

Further, NERC has been advised by the AESO that the AESO practice with respect to the adoption of a NERC Reliability Standard includes a review of the NERC Reliability Standard for applicability to Alberta legislation and electric industry practice. NERC has been advised that, while the objective is to adhere as closely as possible to the requirements of the NERC Reliability Standard, each NERC Reliability Standard

**3353 Peachtree Road NE**  
**Suite 600, North Tower**  
**Atlanta, GA 30326**  
**404-446-2560 | [www.nerc.com](http://www.nerc.com)**

approved in Alberta (called an “Alberta reliability standard”) generally varies from the similar and related NERC Reliability Standard.

NERC requests the AESO consider the proposed interpretation to Regional Reliability Standard BAL-002-WECC-2a in the filing for adoption in Alberta as an “Alberta reliability standard(s),” subject to the required procedures and legislation of Alberta.

Please contact the undersigned if you have any questions concerning this filing.

Respectfully submitted,

/s/ Shamai Elstein

Shamai Elstein  
*Senior Counsel for the North American Electric  
Reliability Corporation*

Enclosure

---

**BEFORE THE  
ALBERTA ELECTRIC SYSTEM OPERATOR**

**NORTH AMERICAN ELECTRIC )  
RELIABILITY CORPORATION )**

**NOTICE OF FILING OF THE  
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION OF  
INTERPRETATION OF REGIONAL RELIABILITY STANDARD  
BAL-002-WECC-2a**

Charles A. Berardesco  
Senior Vice President and General Counsel  
Shamai Elstein  
Senior Counsel  
Lauren A. Perotti  
Counsel  
North American Electric Reliability Corporation  
1325 G Street, N.W., Suite 600  
Washington, D.C. 20005  
(202) 400-3000  
(202) 644-8099– facsimile  
charles.berardesco@nerc.net  
shamai.elstein@nerc.net  
lauren.perotti@nerc.net

*Counsel for the North American Electric  
Reliability Corporation*

November 14, 2016

---

**TABLE OF CONTENTS**

I. NOTICES AND COMMUNICATIONS..... 2

II. BACKGROUND ..... 2

    A. Regulatory Framework..... 2

    B. Interpretation Procedural History..... 3

III. JUSTIFICATION ..... 4

    A. Order No. 789: Non-Traditional Resources May Qualify as Operating Reserve -  
    Spinning ..... 4

    B. Proposed Interpretation ..... 6

IV. EFFECTIVE DATE..... 7

- Exhibit A** Proposed Regional Reliability Standard BAL-002-WECC-2a
- Exhibit B** Implementation Plan
- Exhibit C** Reliability Standards Criteria
- Exhibit D** Complete Record of Development
- Exhibit E** Interpretation Drafting Team Roster



## I. NOTICES AND COMMUNICATIONS

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

Shamai Elstein  
Senior Counsel  
Lauren A. Perotti  
Counsel  
North American Electric Reliability Corporation  
1325 G Street, N.W., Suite 600  
Washington, D.C. 20005  
(202) 400-3000  
(202) 644-8099– facsimile  
shamai.elstein@nerc.net  
lauren.perotti@nerc.net

## II. BACKGROUND

### A. **Regulatory Framework**

A regional difference from a continent-wide Reliability Standard must either be: (1) more stringent than the continent-wide Reliability Standard (which includes a regional standard that addresses matters that the continent-wide Reliability Standard does not), or (2) necessitated by a physical difference in the Bulk-Power System.

WECC is a Regional Entity organized on an Interconnection-wide basis. WECC regional Reliability Standards are intended to apply only in the Western Interconnection. WECC develops regional Reliability Standards in accordance with its *Reliability Standards Development Procedures* (“RSDP”).<sup>2</sup> As discussed in the WECC RSDP, WECC regional Reliability Standards are developed through a transparent, inclusive, open, and balanced process with reasonable notice and opportunity for public comment. Proposed WECC regional Reliability Standards are

---

<sup>2</sup> The WECC RSDP is available at [http://www.nerc.com/FilingsOrders/us/Regional%20Delegation%20Agreements%20DL/WECC\\_RSDP\\_20141223.pdf](http://www.nerc.com/FilingsOrders/us/Regional%20Delegation%20Agreements%20DL/WECC_RSDP_20141223.pdf)

subject to approval by NERC, as the ERO, and the applicable governmental authorities before becoming mandatory and enforceable.

## **B. Interpretation Procedural History**

The Federal Energy Regulatory Commission (“FERC”) approved regional Reliability Standard BAL-002-WECC-2 – Contingency Reserve in Order No. 789, issued on November 21, 2013.<sup>3</sup> On March 5, 2015, Arizona Public Service Company (“APS”) submitted a Standard Authorization Request - Request for Interpretation of BAL-002-WECC-2. Citing FERC Order No. 789, APS sought clarification that APS and other Balancing Authorities and/or Reserve Sharing Groups “can include ‘technologies, such as batteries, both contemplated and not yet contemplated. . .as potential resources [to meet the Operating Reserve-Spinning requirement of BAL-002-WECC-2, Requirement R2] – so long as the . . .resource can meet the response characteristics described in the standard.” The WECC Standards Committee approved the SAR on March 10, 2015 and a drafting team was appointed.

The proposed interpretation was posted for a 45-day public comment period from May 4, 2015 through June 18, 2015. The ballot for the proposed interpretation ran from July 23, 2015 through August 7, 2015. The proposed interpretation achieved a 73.3% quorum and 100% approval. Pursuant to the NERC Rules of Procedure, the proposed interpretation was posted at NERC for a 45-day public comment period from August 4, 2015 through September 17, 2015. Three sets of supportive responses were received.

The proposed interpretation was approved by the WECC Board of Directors on June 16, 2016 and was adopted by the NERC Board of Trustees on November 2, 2016.

---

<sup>3</sup> *Regional Reliability Standard BAL-002-WECC-2 – Contingency Reserve*, Order No. 789, 145 FERC ¶ 61,141 (2013) (“Order No. 789”)note 4 at 1.

### III. JUSTIFICATION

The purpose of the currently-effective continent-wide BAL-002 Disturbance Control Performance Reliability Standard is to ensure the Balancing Authority is able to utilize its Contingency Reserve to balance resources and demand and return Interconnection frequency within defined limits following a Reportable Disturbance. The purpose of regional Reliability Standard BAL-002-WECC-2 — Contingency Reserve is to provide a regional Reliability Standard that specifies the quantity and types of Contingency Reserve required to ensure reliability under normal and abnormal conditions.

The proposed interpretation provides clarity regarding the types of resources that may be used to satisfy the Contingency Reserve requirements of BAL-002-WECC-2; specifically, the resources that may qualify as Operating Reserve – Spinning under the standard. As discussed below, the proposed interpretation is consistent with FERC’s Order No. 789 approving the regional standard. The proposed interpretation is just, reasonable, not unduly discriminatory or preferential, and in the public interest.

#### **A. Order No. 789: Non-Traditional Resources May Qualify as Operating Reserve - Spinning**

BAL-002-WECC-2 Requirement R1.2 provides that each Balancing Authority and each Reserve Sharing Group shall maintain a minimum amount of Contingency Reserve that is comprised by any combination of a number of reserve types, including Operating Reserve – Spinning. Operating Reserve – Spinning is defined in the *Glossary of Terms Used in NERC Reliability Standards* as follows:

The portion of Operating Reserve consisting of:

- Generation synchronized to the system and fully available to serve load within the Disturbance Recovery Period following the contingency event; or



- Load fully removable from the system within the Disturbance Recovery Period following the contingency event.

BAL-002-WECC-2 Requirement R2 provides that each Balancing Authority and each Reserve Sharing Group shall maintain at least half of its minimum amount of Contingency Reserve per Requirement R1 as Operating Reserve – Spinning that meets two reserve characteristics: (i) Reserve that is immediately and automatically responsive to frequency deviations through the action of a governor or other control system; and (ii) Reserve that is capable of fully responding within ten minutes.

Responding to comments submitted by the California Independent System Operator Corporation, FERC determined in Order No. 789 that non-traditional resources may qualify as “Operating Reserve – Spinning” for purposes of BAL-002-WECC-2 so long as those resources satisfied the technical and performance requirements in Requirement R2. FERC stated:

The Commission determines that non-traditional resources, including electric storage facilities, may qualify as “Operating Reserve – Spinning” provided those resources satisfy the technical and performance requirements in Requirement R2. Our determination is supported by the standard drafting team’s response to a comment during the standard drafting process where the standard drafting team stated that “technologies, such as batteries, both contemplated and not yet contemplated are included in the standard as potential resources – so long as the undefined resource can meet the response characteristics described in the standard ...The language does not preclude any specific technology; rather, the language delineates how that technology must [] respond.” We also note that non-traditional resources could contribute to contingency reserve under the regional Reliability Standard if they are resources, “other than generation or load, that can provide energy or reduce energy consumption.” (internal citation omitted).<sup>4</sup>

As discussed below, FERC’s determination in paragraph 48 of Order No. 789 forms the basis for the proposed interpretation.

---

<sup>4</sup> Order No. 789 at P 48.

## **B. Proposed Interpretation**

Regional Reliability Standard BAL-002-WECC-2a adds the following interpretation to Section E of the standard:

Arizona Public Service (APS) sought clarification that for purposes of BAL-002-WECC-2, Requirement R2, APS and other Balancing Authorities and/or Reserve Sharing Groups can include “technologies, such as batteries, both contemplated and not yet contemplated...as potential resources [to meet the Operating Reserve – Spinning requirement of BAL-002-WECC-2, Requirement R2] – so long as the...resource can meet the response characteristics described in the standard.”

A standards interpretation team comprised of members of the original BAL drafting team concluded that APS’ understanding was correct.

“[N]on-traditional resources, including electric storage facilities, may qualify as “Operating Reserve – Spinning” so long as they meet the technical and performance requirements in Requirement R2 (i.e., that the resources must be immediately and automatically responsive to frequency deviations through the action of a control system and capable of fully responding within ten minutes).<sup>[FN1]</sup>

In Order 789, Paragraph 48, the Federal Energy Regulatory Commission (Commission) responded to the California Independent System Operator that:

### **Commission Determination**

48. The Commission determines that non-traditional resources, including electric storage facilities, may qualify as “Operating Reserve – Spinning” provided those resources satisfy the technical and performance requirements in Requirement R2. Our determination is supported by the standard drafting team’s response to a comment during the standard drafting process where the standard drafting team stated that “technologies, such as batteries, both contemplated and not yet contemplated are included in the standard as potential resources – so long as the undefined resource can meet the response characteristics described in the standard ...The language does not preclude any specific technology; rather, the language delineates how that technology must [] respond.”<sup>[FN2]</sup> We also note that non-traditional resources could contribute to contingency reserve under the regional Reliability Standard if they

are resources, “other than generation or load, that can provide energy or reduce energy consumption.”

<sup>[FN1]</sup>: FERC Order 789, P47. July 18, 2013.

See also FERC Order 740, Section E, Demand-Side Management as a Resource, at P 50: “The Commission clarified that the purpose of this directive was to ensure comparable treatment of demand-side management with conventional generation or any other technology and to allow demand-side management to be considered as a resource for contingency reserves on this basis without requiring the use of any particular contingency reserve option.”

<sup>[FN2]</sup>: “Fn 44 Petition, Exhibit C at 20.”

The proposed interpretation thus incorporates, into the standard document, FERC’s determination in Order No. 789 that non-traditional resources may qualify as “Operating Reserve – Spinning” provided those resources satisfy the technical and performance requirements in Requirement R2. Inclusion of the proposed interpretation provides clarity to Balancing Authorities and Reserve Sharing Groups in the WECC region regarding the types of resources that may be used to meet the minimum Contingency Reserve requirements of the standard.

#### IV. **EFFECTIVE DATE**

The proposed implementation plan is attached to this filing as **Exhibit B**.

Respectfully submitted,

/s/ Lauren A. Perotti

Charles A. Berardesco  
Senior Vice President and General Counsel  
Shamai Elstein  
Senior Counsel  
Lauren A. Perotti  
Counsel  
North American Electric Reliability Corporation  
1325 G Street, N.W., Suite 600  
Washington, D.C. 20005  
(202) 400-3000  
(202) 644-8099– facsimile  
charles.berardesco@nerc.net  
shamai.elstein@nerc.net  
lauren.perotti@nerc.net

*Counsel for the North American Electric  
Reliability Corporation*

November 14, 2016

**EXHIBITS A – B and D – E**

## EXHIBIT C – Reliability Standards Criteria

The proposed Interpretation of Requirement R2, BAL-002-WECC-2, Contingency Reserve, a Regional Reliability Standard (RRS), does not change or modify the standard in any way. It only interprets Requirement R2 of the document. Each of the following standardized questions was asked and answered when the original underlying RRS was filed. As such, a brief response indicating no changes were made to the RRS has been provided to many of the standardized questions that follow.

---

NERC is responsible for ensuring that the Reliability Standards, Violation Risk Factors (VRF), Violation Severity Levels (VSL), definitions, Variances, and Interpretations developed by drafting teams are developed in accordance with NERC processes. They must also meet NERC's benchmarks for Reliability Standards, as well as criteria for governmental approval.

The discussion below explains how the proposed regional reliability standard has met or exceeded the Reliability Standards criteria:

**1. Proposed reliability standards must be designed to achieve a specified reliability goal.**

The proposed interpretation does not change the purpose of the RRS.

**2. Proposed reliability standards must contain a technically sound method to achieve the goal.**

**No Change to the Standard**

Pursuant to the WECC Reliability Standards Development Procedures (Procedures), a request for interpretation of a document is limited to clarifying existing requirements in the approved document and may not expand upon a requirement or provide guidance on how to implement a requirement. This interpretation does not change any of the reliability-related substance of the RRS.

**Standard Development**

This filing of BAL-002-WECC-2a was developed using the NERC and WECC Standards development processes in effect at each point in the process. Among other things, these processes include drafting of the interpretation by a drafting team composed of subject matter experts (SMEs) from the original drafting team; biographies of those SMEs are provided with this filing. These processes also include repeated public iterative comment/response cycles whereby comments are received from the industry and responses to those comments are provided by the drafting team.

**Foundation for the Interpretation**

The Interpretation is based on FERC Order 789. In Order 789, Paragraph 48, FERC responded to the California Independent System Operator that:

## **FERC Determination**

“48. The Commission determines that non-traditional resources, including electric storage facilities, may qualify as “Operating Reserve – Spinning” provided those resources satisfy the technical and performance requirements in Requirement R2. Our determination is supported by the standard drafting team’s response to a comment during the standard drafting process where the standard drafting team stated that “technologies, such as batteries, both contemplated and not yet contemplated are included in the standard as potential resources – so long as the undefined resource can meet the response characteristics described in the standard ...The language does not preclude any specific technology; rather, the language delineates how that technology must [] respond.”<sup>1</sup> We also note that non-traditional resources could contribute to contingency reserve under the regional Reliability Standard if they are resources, “other than generation or load, that can provide energy or reduce energy consumption.”

### **3. Proposed reliability standards must be applicable to users, owners, and operators of the bulk power system, and not others.**

The proposed interpretation does not change the applicability of the RRS. BAL-002-WECC-2a applies only to Balancing Authorities and Reserve Sharing Groups in the Western Interconnection.

### **4. Proposed reliability standards must be clear and unambiguous as to what is required and who is required to comply.**

The proposed interpretation does not change the requirements of the standard or the applicability. It was posted for separate 45-day comment periods at WECC and NERC. There were no negative concerns, no minority positions, and no requests for changes in either posting. When balloted, the Ballot Pool approved the project with a 100 percent weighted sector approval, with zero negative votes and three abstentions.

### **5. Proposed reliability standards must include clear and understandable consequences and a range of penalties (monetary and/or non-monetary) for a violation.**

The proposed interpretation does not change or impact any of the VRFs or VSLs.

### **6. Proposed reliability standards must identify clear and objective criterion or measure for compliance, so that it can be enforced in a consistent and non-preferential manner.**

The proposed interpretation does not change any of the Measures in the RRS.

---

<sup>1</sup> “Fn 44 Petition, Exhibit C at 20.”

**7. Proposed reliability standards should achieve a reliability goal effectively and efficiently - but does not necessarily have to reflect “best practices” without regard to implementation cost.**

The proposed interpretation does not change any of the reliability-related substance of the underlying RRS.

**8. Proposed reliability standards cannot be “lowest common denominator,” i.e., cannot reflect a compromise that does not adequately protect bulk power system reliability.**

The proposed interpretation does not change any of the reliability-related substance of the underlying RRS.

**9. Proposed reliability standards may consider costs to implement for smaller entities but not at consequence of less than excellence in operating system reliability.**

The proposed interpretation does not change any of the reliability-related substance of the underlying RRS.

**10. Proposed reliability standards must be designed to apply throughout North America to the maximum extent achievable with a single reliability standard while not favoring one area or approach.**

The proposed interpretation does not alter or otherwise change the applicable entities operating within the Western Interconnection that are identified in the RRS.

**11. Proposed reliability standards should cause no undue negative effect on competition or restriction of the grid.**

The proposed interpretation is not anticipated to have any negative impact on competition. Rather, due to the clarification provided additional markets may be availed to fulfil the associated reserve requirements.

**12. The implementation time for the proposed reliability standards must be reasonable.**

The requested implementation time of immediately upon governmental authority approval is reasonable. In light of the earlier July 18, 2013 FERC Order 789, entities may already be implementing the practices clarified in the interpretation.

**13. The reliability standard development process must be open and fair.**

WECC followed the standard development process in effect at the time of each step in the process.

In accordance with the Procedures, effective March 1, 2012, all drafting team meetings are open to the public.

Two drafting team meetings were held. One meeting addressed the issue; one meeting addressed responses to comments.



Notice of the meetings was provided to NERC, posted on the WECC Web site and embedded in the minutes of each meeting. Meeting minutes are posted on the WECC Web site and accessible by the public.

All meetings were supported by a telephone conference bridge associated with an on-line internet visual capability allowing all participants to see the document(s) as they were being developed. Further, this team held an open-mic standards briefing prior to balloting affording the industry an additional opportunity to have its questions addressed.

The proposed interpretation was posted for separate 45-day comment periods at WECC and at NERC. Neither posting resulted in any requests for change.

Comments and their responses are included in this filing and posted on the WECC Web Site at the WECC-0114 Project Page on the Submitted and Review Comments accordion.

**14. Proposed reliability standards must balance with other vital public interests.**

NERC is not aware of any other vital public interests. No such balancing concerns were raised or noted.

**15. Proposed reliability standards must consider any other relevant factors.**

NERC is not aware of any other relevant factors and none were raised during development.