

133 FERC ¶ 61,063  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 40

[Docket No. RM09-15-000; Order No. 740 ]

Version One Regional Reliability Standard for Resource and Demand Balancing

(Issued October 21, 2010)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Final Rule.

SUMMARY: Under section 215 of the Federal Power Act, the Commission hereby remands a revised regional Reliability Standard developed by the Western Electricity Coordinating Council and approved by the North American Electric Reliability Corporation, which the Commission has certified as the Electric Reliability Organization responsible for developing and enforcing mandatory Reliability Standards. The revised regional Reliability Standard, designated by WECC as BAL-002-WECC-1, would set revised Contingency Reserve requirements meant to maintain scheduled frequency and avoid loss of firm load following transmission or generation contingencies.

EFFECTIVE DATE: This rule will become effective [insert date that is 30 days after publication in the **FEDERAL REGISTER**].

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SUPPLEMENTARY INFORMATION:

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Version One Regional Reliability Standard for  
Resource and Demand Balancing

Docket No. RM09-15-000

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133 FERC ¶ 61,063  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;  
Marc Spitzer, Philip D. Moeller,  
John R. Norris, and Cheryl A. LaFleur.

Version One Regional Reliability Standard for  
Resource and Demand Balancing

Docket No. RM09-15-000

FINAL RULE

ORDER NO. 740

(Issued October 21, 2010)

1. Pursuant to section 215 of the Federal Power Act (FPA),<sup>1</sup> the Commission hereby remands a revised regional Reliability Standard developed by the Western Electricity Coordinating Council (WECC) and approved by the North American Electric Reliability Corporation (NERC), which the Commission has certified as the Electric Reliability Organization (ERO) responsible for developing and enforcing mandatory Reliability Standards.<sup>2</sup> The revised regional Reliability Standard, designated by WECC as BAL-

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<sup>1</sup> 16 U.S.C. 824o (2006).

<sup>2</sup> *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062, *order on reh'g & compliance*, 117 FERC ¶ 61,126 (2006), *aff'd sub nom. Alcoa, Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009).

002-WECC-1,<sup>3</sup> is meant to ensure that adequate resources are available at all times to maintain scheduled frequency, and avoid loss of firm load following transmission or generation contingencies. As discussed below, the Commission finds that the proposed regional Reliability Standard does not meet the statutory criteria for approval that it be just, reasonable, not unduly discriminatory or preferential, and in the public interest.<sup>4</sup>

2. The Commission remands the proposed regional Reliability Standard based on concerns that WECC has not provided adequate technical support to demonstrate that the requirements of the proposed regional Reliability Standard are sufficient to ensure the reliable operation of the Bulk-Power System within WECC. Specifically, WECC's data indicates that extending the reserve restoration period from 60 to 90 minutes presents an unreasonable risk that a second major contingency could occur before reserves are restored after an initial contingency. Without further technical justification demonstrating that this less stringent requirement will adequately support reliability in the Western Interconnection, the Commission is unable to determine that the proposed regional Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest. Accordingly, we remand WECC regional

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<sup>3</sup> NERC designates the version number of a Reliability Standard as the last digit of the Reliability Standard number. Therefore, original Reliability Standards end with "-0" and modified version one Reliability Standards end with "-1."

<sup>4</sup> 16 U.S.C. 824o(d)(2).

Reliability Standard BAL-002-WECC-1 to the ERO so that the Regional Entity may develop further modifications consistent with this final rule.<sup>5</sup>

## **I. Background**

### **A. Mandatory Reliability Standards**

3. Section 215 of the FPA requires a Commission-certified ERO to develop mandatory and enforceable Reliability Standards, which are subject to Commission review and approval. Once approved, the Reliability Standards may be enforced by the ERO, subject to Commission oversight, or by the Commission independently.<sup>6</sup>

4. Reliability Standards that the ERO proposes to the Commission may include Reliability Standards that are proposed to the ERO by a Regional Entity.<sup>7</sup> A Regional Entity is an entity that has been approved by the Commission to enforce Reliability Standards under delegated authority from the ERO.<sup>8</sup> When the ERO reviews a regional

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<sup>5</sup> In Order No. 672, the Commission found that it should order only the ERO to modify a Reliability Standard because the ERO is the only entity that may directly submit a proposed Reliability Standard to the Commission for approval. *Rules Concerning Certification of the Electric Reliability Organization; Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, 71 FR 8662 (Feb. 17, 2006), FERC Stats. & Regs. ¶ 31,204, at P 423, *order on reh'g*, Order No. 672-A, 71 FR 19814 (Apr. 18, 2006), FERC Stats. & Regs. ¶ 31,212 (2006).

<sup>6</sup> 16 U.S.C. 824o(e)(3).

<sup>7</sup> 16 U.S.C. 824o(e)(4).

<sup>8</sup> 16 U.S.C. 824o(a)(7) and (e)(4).

Reliability Standard that would be applicable on an interconnection-wide basis and that has been proposed by a Regional Entity organized on an interconnection-wide basis, the ERO must rebuttably presume that the regional Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest.<sup>9</sup> In turn, the Commission must give “due weight” to the technical expertise of the ERO and of a Regional Entity organized on an interconnection-wide basis.<sup>10</sup>

5. In Order No. 672, the Commission urged uniformity of Reliability Standards, but recognized a potential need for regional differences.<sup>11</sup> Accordingly, the Commission stated that:

As a general matter, we will accept the following two types of regional differences, provided they are otherwise just, reasonable, not unduly discriminatory or preferential and in the public interest, as required under the statute: (1) a regional difference that is more stringent than the continent-wide Reliability Standard, including a regional difference that addresses matters that the continent-wide Reliability Standard does not; and

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<sup>9</sup> 18 C.F.R. 39.5 (2010).

<sup>10</sup> 16 U.S.C. 824o(d)(2).

<sup>11</sup> Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 290.

(2) a regional Reliability Standard that is necessitated by a physical difference in the Bulk-Power System.<sup>12</sup>

**B. Western Electricity Coordinating Council**

6. On April 19, 2007, the Commission accepted delegation agreements between NERC and each of eight Regional Entities.<sup>13</sup> In its order, the Commission accepted WECC as a Regional Entity organized on an Interconnection-wide basis. As a Regional Entity, WECC oversees transmission system reliability in the Western Interconnection. The WECC region encompasses nearly 1.8 million square miles, including 14 western U.S. states, the Canadian provinces of Alberta and British Columbia, and the northern portion of Baja California in Mexico.

7. In June 2007, the Commission approved eight regional Reliability Standards for WECC including the currently effective regional Reliability Standard for operating reserves, WECC-BAL-STD-002-0.<sup>14</sup> The Commission found that the current regional Reliability Standard was more stringent than the corresponding NERC Reliability Standard, BAL-002-0, since WECC required a more stringent minimum reserve

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<sup>12</sup> *Id.* P 291.

<sup>13</sup> *North American Electric Reliability Corp.*, 119 FERC ¶ 61,060, at P 432 (2007).

<sup>14</sup> *North American Electric Reliability Corp.*, 119 FERC ¶ 61,260, at P 53 (2007).



requirement than the continent-wide requirement.<sup>15</sup> Moreover, the Commission found that WECC's requirement to restore contingency reserves within 60 minutes was more stringent than the 90 minute restoration period as set forth in NERC's BAL-002-0.<sup>16</sup>

8. The Commission directed WECC to develop certain minor modifications to WECC-BAL-STD-002-0, as identified by NERC in its filing letter for the current standard.<sup>17</sup> For example, the Commission determined that: (1) regional definitions should conform to definitions set forth in the NERC Glossary of Terms Used in Reliability Standards (NERC Glossary) unless a specific deviation has been justified; and (2) documents that are referenced in the Reliability Standard should be attached to the Reliability Standard. The Commission also found that it is important that regional Reliability Standards and NERC Reliability Standards achieve a reasonable level of consistency in their structure so that there is a common understanding of the elements. Finally, the Commission directed WECC to address stakeholder concerns regarding ambiguities in the terms "load responsibility" and "firm transaction."<sup>18</sup>

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<sup>15</sup> *Id.*

<sup>16</sup> *Id.*

<sup>17</sup> *Id.* P 55.

<sup>18</sup> *Id.* P 56.

**C. WECC Regional Reliability Standard BAL-002-WECC-1**

9. On March 25, 2009, NERC submitted a petition (NERC Petition) to the Commission seeking approval of BAL-002-WECC-1<sup>19</sup> and requesting the concurrent retirement of BAL-STD-002-0.<sup>20</sup> In that March petition, NERC states that the proposed regional Reliability Standard was approved by the NERC Board of Trustees at its October 29, 2008 meeting. NERC also requests an effective date for the regional Reliability Standard of 90 calendar days after receipt of applicable regulatory approval.

10. The proposed regional Reliability Standard contains three main provisions. Requirement R1 provides that each reserve sharing group<sup>21</sup> or balancing authority must maintain a minimum contingency reserve that is the greater of (1) an amount of reserve equal to the loss of the most severe single contingency; or (2) an amount of reserve equal to the sum of three percent of the load and three percent of net generation. Requirement

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<sup>19</sup> See 18 C.F.R. 39.5(a) (requiring the ERO to submit regional Reliability Standards on behalf of a Regional Entity).

<sup>20</sup> The proposed regional Reliability Standard is not attached to the NOPR. It is, however, available on the Commission's eLibrary document retrieval system in Docket No. RM09-15-000 and is on the ERO's website, *available at* <http://www.nerc.com>.

<sup>21</sup> A "reserve sharing group" is a group whose members consist of two or more balancing authorities that collectively maintain, allocate, and supply operating reserves required for each balancing authority's use in recovering from contingencies within the group. See NERC Glossary, *available at* [http://www.nerc.com/docs/standards/rs/Glossary\\_2009April20.pdf](http://www.nerc.com/docs/standards/rs/Glossary_2009April20.pdf).

R2 states that each reserve sharing group or balancing authority must maintain at least half of the contingency reserve as spinning reserve. Requirement R3 identifies acceptable types of reserve to satisfy Requirement R1:

R3.1. Spinning Reserve;

R3.2. Interruptible Load;

R3.3. Interchange Transactions designated by the source Balancing Authority as non-spinning contingency reserve;

R3.4. Reserve held by the other entities by agreement that is deliverable on Firm Transmission Service;

R3.5. An amount of off-line generation which can be synchronized and generating; or

R3.6. Load, other than Interruptible Load, once the Reliability Coordinator has declared a capacity or energy emergency.

In addition, compliance measure M1 provides that a reserve sharing group or balancing authority must have documentation that it maintained 100 percent of required contingency reserve levels “except within the first 105 minutes (15 minute Disturbance Recovery Period, plus 90 minute Contingency Reserve Restoration Period) following an event requiring the activation of Contingency Reserves.”<sup>22</sup>

11. The NERC Petition explains that, because WECC developed the modifications to the regional Reliability Standard submitted in the instant proceeding, and the standard applies on an Interconnection-wide basis, NERC must rebuttably presume that the WECC

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<sup>22</sup> Proposed WECC Reliability Standard BAL-002-WECC-1, Compliance Measure M1.

Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest.<sup>23</sup> NERC states that it agrees with WECC that the proposed WECC regional Reliability Standard establishes requirements that are more stringent than those provided in the corresponding NERC Reliability Standard.

12. On March 18, 2010, the Commission issued a Notice of Proposed Rulemaking (NOPR) proposing to remand the proposed regional Reliability Standard to the ERO so that the Regional Entity may develop further modifications.<sup>24</sup> The Commission's proposal to remand the proposed Regional Reliability Standard was based on a lack of technical support for the adoption of less stringent requirements than those in the currently effective WECC regional Reliability Standard and out of concern that the proposed regional Reliability Standard is less stringent than the NERC continent-wide Reliability Standard pertaining to contingency reserves. The Commission expressed particular concern with respect to a provision in the proposed regional Reliability Standard that would permit a balancing authority, when an emergency is declared, to count "Load, other than Interruptible Load" as contingency reserve. The Commission understood this provision to allow a balancing authority to shed firm load when a single

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<sup>23</sup> See NERC Petition at 8; and 16 U.S.C. 824o(d)(3).

<sup>24</sup> *North American Electric Reliability Corp.*, NOPR, 75 FR 14,103 (March 24, 2010), FERC Stats. & Regs. ¶ 32,653 (2010).

contingency occurs instead of procuring and utilizing generation or demand response resource held in reserve for contingencies to balance the Bulk-Power System. The Commission also proposed to direct WECC to develop certain modifications to the regional Reliability Standard that would explicitly allow demand-side management to be used as a resource for contingency reserves.

13. In response to the NOPR, comments were filed by 16 interested parties.<sup>25</sup> Several commenters, including WECC, opposed the proposed remand, while others supported it. In its comments, WECC included supplemental data to support the Commission's approval of the proposed regional Reliability Standard. In the discussion below, we address the issues raised by these comments and, pursuant to section 215(d)(4) of the FPA, we adopt the NOPR proposal to remand the proposed regional Reliability Standard.

## **II. Discussion**

14. Applying the principal of due weight to the technical expertise of NERC and WECC, the Commission finds that the proposed regional Reliability Standard BAL-002-WECC-1 does not meet the statutory criteria for approval, that it be just, reasonable, not unduly discriminatory or preferential, and in the public interest. In particular, the Commission is concerned that reliability would be reduced upon approval of the proposed regional Reliability Standard because WECC's data indicates that extending the

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<sup>25</sup> See Appendix A, *List of Commenters*.

reserve restoration period from 60 to 90 minutes would create an unreasonable risk that a second major contingency could occur before reserves are restored after an initial contingency. There must be sufficient technical justification showing that the Western Interconnection can be operated reliably with the reduced stringency. The Commission finds that the NERC and the Regional Entity have failed to demonstrate that the proposal is adequate to ensure the reliability of the Bulk-Power System within WECC.

Accordingly, under section 215(d)(4) of the FPA, the Commission remands regional Reliability Standard BAL-002-WECC-1 to the ERO with instruction for the Regional Entity to develop modifications, as discussed below.

**A. Due Weight and Effect of Remand**

15. Several commenters point out that, under section 215(d)(2) of the FPA, the Commission must give due weight to the technical expertise of the ERO and WECC as the Regional Entity organized on an Interconnection-wide basis.<sup>26</sup> These parties argue that, applying the principal of due weight, the Commission should approve the proposed regional Reliability Standard. In addition, NERC states that it must rebuttably presume that a standard developed by WECC is just, reasonable, not unduly preferential, and in the public interest. NERC states that, as a Regional Entity organized on an interconnection-wide basis, WECC has exercised its technical expertise in regard to this

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<sup>26</sup> *E.g.*, NERC, WECC, MISO, WIRAB, and Xcel.

interconnection-wide Reliability Standard, supplemented by the additional technical analyses provided in its response. Xcel agrees and states that the Commission has not allowed any deference to WECC and stakeholder experts that worked diligently to develop this Reliability Standard.

16. Several commenters contend that the proposed regional Reliability Standard offers significant benefits over the current version.<sup>27</sup> Sempra states that the proposed standard would advance three goals: it simplifies reserve accounting at balancing authorities by clarifying which party carries reserves for power imports and exports; it includes renewable resources; and it clarifies reserves responsibility. If the Commission decides to remand the proposed Reliability Standard, Sempra urges the Commission to require expedited procedures because of the importance of replacing the current regional Reliability Standard, which, Sempra contends, contains its own flaws and ambiguities. WECC argues that remand of the proposed standard would cause a greater probability of frequency-related instability, uncontrolled separation, or cascading outages because the current WECC standard does not take renewable resources, such as wind and solar, into account when calculating minimum contingency reserve requirements.

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<sup>27</sup> *E.g.*, NERC, WECC, Bonneville, Idaho Power, NV Energy, SCE, WIRAB, and Xcel.

17. By contrast, Puget Sound states that, while FERC is required to give due weight to the technical expertise of the ERO no deference is due when the action of the ERO and Regional Entity are patently unreasonable and arbitrary. Puget Sound contends that a regulatory decision based on a review of only eight hours of data, as provided by WECC, cannot be reasonably explained or considered to be supported by substantial evidence. Powerex and NV Energy agree that WECC provided insufficient data in its request for approval with respect to whether the proposed regional Reliability Standard is just and reasonable.

#### **Commission Determination**

18. Section 215(d)(2) of the FPA provides that the Commission “shall give due weight to the technical expertise” of the ERO or a Regional Entity organized on an Interconnection-wide basis “with respect to the content of a proposed standard or modification.” As the Commission explained in Order No. 672, the ERO or Interconnection-wide Regional Entity “must justify to the Commission its contention that the proposed Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest.”<sup>28</sup> Thus, consistent with our explanation in Order No. 672, it is necessary for the ERO or Regional Entity to explain adequately a Reliability Standard or modifications to a Reliability Standard.

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<sup>28</sup> Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 345.



19. The Commission has given due weight to the technical expertise of the Regional Entity as it is presented both in the NERC Petition and in WECC's comments and supporting data and we have determined that WECC provided inadequate support for approval of the proposed regional Reliability Standard. In its petition, NERC provides a detailed explanation of why it believes the proposal satisfies the statutory criteria for approval based on the guidance provided by the Commission in Order No. 672 regarding the factors it would consider in making that determination.<sup>29</sup> However, this explanation fails to adequately address the substantive modifications to the regional Reliability Standard. Moreover, WECC's comments and supplemental data did not adequately address the Commission's concerns expressed in the NOPR that the extension of the reserve restoration period will maintain reliable operation of the Western Interconnection. Without adequate explanation and technical justification, we are unable to determine whether the proposal satisfies the statutory criteria for approval and, therefore, remand the revised Reliability Standard to the ERO with instruction for the Regional Entity to develop modifications, as discussed below.

20. The Commission does not take lightly its authority to remand a Reliability Standard. We understand that before a Reliability Standard reaches the Commission it must be vetted through an intensive standard development process. Nevertheless, despite

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<sup>29</sup> Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 320-337.

the efforts of the different drafting team members who contributed to the development of this regional Reliability Standard, for the reasons discussed below, we believe that the statutory standard for approval has not been met on the record before us.

21. We do not believe, as WECC suggests, that this remand will cause a greater probability of frequency-related instability, uncontrolled separation or cascading outages. WECC does not provide any supporting data or technical analysis to support this claim. By remanding the proposed regional Reliability Standard, the Commission is upholding the currently effective regional Reliability Standard. The Commission recognizes that the Western Interconnection is experiencing substantial growth in variable renewable generation. We believe that the current regional Reliability Standard has proved effective for many years and will continue to do so until WECC can modify as necessary, through the standards development process, this regional Reliability Standard to ensure adequate reserves to reliably accommodate this expansion. Furthermore, we decline to set expedited procedures for the development of a replacement regional Reliability Standard, but WECC is free to expedite its process to the extent WECC finds appropriate.

**B. Contingency Reserve Restoration Period**

22. The current regional Reliability Standard sets a maximum contingency reserve restoration period that is more stringent than the continent-wide requirement. NERC Reliability Standard BAL-002-0 provides that a balancing authority or reserve sharing group responding to a disturbance must fully restore its contingency reserves within 90

minutes following the disturbance recovery period, which is set at 15 minutes.<sup>30</sup> The current WECC regional BAL Reliability Standard requires reserve sharing groups and balancing authorities to maintain 100 percent of required operating reserve levels except within the first 60 minutes following an event requiring the activation of operating reserves.<sup>31</sup> In approving WECC-BAL-STD-002-0, the Commission found that WECC's requirement to restore contingency reserves within 60 minutes was more stringent than the 90 minute restoration period set forth in NERC's BAL-002-0.<sup>32</sup> WECC now proposes to replace the current 60 minute restoration period requirement with a new provision that would require the restoration of contingency reserves within 90 minutes from the end of the disturbance recovery period (15 minutes), thus matching the continent-wide requirement.

### **NOPR Proposal**

23. In the NOPR, the Commission proposed to remand the regional Reliability Standard BAL-002-WECC-1 based on, among other things, a lack of any technical justification or analysis of the potential increased risk to the Western Interconnection

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<sup>30</sup> Reliability Standard BAL-002-0, Requirements R4 and R6.

<sup>31</sup> WECC regional Reliability Standard WECC-BAL-STD-002-0, Measure of Compliance WM1.

<sup>32</sup> *North American Electric Reliability Corp.*, 119 FERC ¶ 61,260 at P 53.

resulting from the increase in the contingency reserve restoration period. The Commission noted that, without sufficient data and analysis, it is unable to determine whether the increase in contingency reserve restoration period is sufficient to maintain the reliable operation of the Bulk-Power System in the Western Interconnection. The Commission also noted that in the Western Interconnection a significant number of transmission paths are voltage or frequency stability-limited, in contrast to other regions of the Bulk-Power System where transmission paths more often are thermally-limited. Disturbances that result in a stability-limited transmission path overload, generally, must be responded to in a shorter time frame than a disturbance that results in a thermally-limited transmission path overload. The Commission stated its understanding that this physical difference is one of the reasons for the need for certain provisions of regional Reliability Standards in the Western Interconnection.

### **Comments**

24. WECC, supported by Bonneville, Idaho Power, SCE, and Xcel, argues that additional studies are unnecessary because the proposed restoration period is identical to the continent-wide restoration period. WECC comments that the Commission should defer to WECC's technical expertise in concluding that more stringent contingency reserve restoration period is no longer necessary. WECC also offers historical data that demonstrates that a second contingency involving the loss of a resource greater than 1000 MW between 60 and 90 minutes after a first contingency occurred six times in the last 15

years or 0.4 events on an annual basis, which, WECC argues, is insufficient to require rejection of a proposed standard on the basis of reliability impact. Bonneville and Xcel argue that increasing the contingency reserve restoration period will result in more efficient system operation without sacrificing reliability. Xcel adds that it will allow for more efficient communication among balancing authorities because the restoration period will be closer to the e-tagging system approval cycle.

25. MISO comments that it is imperative that the Commission give due consideration to approving modifications to Reliability Standards so that Regional Entities can implement changes as understanding grows and experience is gained. MISO contends that disallowance of reasonable modifications, such as those presented here, will have the unintended consequence of fostering a reluctance to develop other regional standards, or encouraging a minimalist approach when standards must necessarily be developed. WECC echoes these concerns and argues that there is no requirement that a regional Reliability Standard can only be modified in a manner that makes it even more stringent. Such a requirement, WECC contends, would create a “one-way ratchet” that would severely inhibit the ability to adjust Reliability Standards to meet changing conditions, would encourage proposed standards reflecting the “lowest common denominator” and would fail to provide deference to the technical expertise of an interconnection-wide Regional Entity.

### **Commission Determination**

26. The Commission finds that the extension of the reserve restoration period has not been justified as an acceptable level of risk within the Western Interconnection. WECC's own analysis shows that, based on historical experience, replacing the 60 minute requirement with the continent-wide 90 minute requirement could result in a second major contingency before restoration of reserves would be required, and that a second major contingency occurred within WECC during this extended time frame six times in the last 15 years.<sup>33</sup> WECC argues that in the Western Interconnection "instability and/or underfrequency load shedding normally would not occur in the absence of a third contingency of significant magnitude within the restoration period."<sup>34</sup> WECC's

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<sup>33</sup> WECC's analysis shows that, over the past 15 years, the proposed increased contingency reserve restoration period would have resulted in 139 more events within the proposed 90 minute contingency reserve restoration period. Limiting the analysis to losses of generation greater than 500 MW, there were only 58 events occurring within the proposed extended contingency reserve restoration period. Limiting the analysis to losses of generation greater than 1000 MW, there were only six events during the extended contingency restoration period. WECC contends that losses of less than 1,000 MW of generation have a minimal impact on the system frequency response of the Western Interconnection and have minimal impacts on the reliability of the interconnected system. WECC May 24, 2010 Comments at 13.

<sup>34</sup> WECC May 24, 2010 Comments at 13 n.10.

generalization, however, is unsupported by historical quantification or documentation in this record and, thus, does not persuade us.<sup>35</sup>

27. While it is not inevitable that the proposed extension of the contingency reserve restoration period would result in adverse reliability impacts in the Western Interconnection, the data provided shows that the Western Interconnection could be exposed to the potential for a major disturbance every two to three years that could result in frequency-related instability, uncontrolled separation or cascading outages. The Commission is particularly concerned about these potential events occurring in the Western Interconnection because, as the Commission discussed in the NOPR, it is our understanding that a significant number of transmission paths in the Western Interconnection are voltage or frequency stability-limited, in contrast to other regions of the Bulk-Power System where transmission paths more often are thermally-limited. Disturbances that occur in a stability-limited transmission path overload, generally, must be responded to in a shorter time frame than a disturbance that occurs in a thermally-

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<sup>35</sup> WECC's statement is consistent with a statement made in a 2007 compliance filing that "WECC operates its system in such a manner that the system is at least two contingencies away from a cascading failure." WECC Compliance Filing, Docket No. RR07-11-000, at 5 (filed July 9, 2007). Nevertheless, WECC is proposing to change its operating conditions by extending the reserve restoration period. Thus, it must provide adequate technical justification that the revised requirements will maintain reliable operation of the Bulk-Power System in the Western Interconnection.

limited transmission path overload.<sup>36</sup> A thermal limit is determined by how much a line can overheat without damaging equipment; lines that are thermally-limited can have short-term emergency limits that are higher than the normal line rating, since heating occurs over a period of time. This is different from a stability limit, which is determined by a system-wide voltage or frequency stability constraint, and loading the line above this limit for any amount of time could result in instability and cascading outages.

28. The reliance on stability-limited transmission paths becomes a concern during the contingency reserve restoration period because balancing authorities rely on imported power from external sources until the entity that had the disturbance replaces the resource lost during the disturbance.<sup>37</sup> Since stability-limited lines do not have higher emergency ratings, as thermally-limited lines can, any disturbance that would result in increasing flows over a stability-limited line must be addressed in a shorter time-frame than a disturbance that only affects thermally-limited lines. There will be some situations in which imports stress stability-limited transmission lines. In those circumstances, extending the contingency reserve restoration period would extend the amount of time the imported power could stress the stability limited transmission lines, potentially leaving

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<sup>36</sup> NOPR, FERC Stats. & Regs. ¶ 32,653 at P 37.

<sup>37</sup> See NERC, *Balancing and Frequency Control*, at 6-10 (Nov. 2009), available at [http://www.nerc.com/docs/oc/rs/NERC\\_Balancing\\_and\\_Frequency\\_Control\\_Part\\_1\\_9Nov2009\\_\(Revision2\).pdf](http://www.nerc.com/docs/oc/rs/NERC_Balancing_and_Frequency_Control_Part_1_9Nov2009_(Revision2).pdf).



the Western Interconnection in a stressed condition that could result in adverse reliability impacts if another disturbance were to occur. On remand, we direct WECC to develop a modification to the reserve restoration period or provide evidence demonstrating that extending the reserve restoration period to 90 minutes and adding a disturbance recovery period of 15 minutes would not increase the risk of a major disturbance in the Western Interconnection.

29. The fact that the proposed extension of the reserve restoration period would match the continent-wide requirement and, thus, would foster certain operational efficiencies through the use of the e-tagging system does not allay our concerns that the extension could be harmful to the reliable operation of the Western Interconnection. The e-tagging system is an efficient tool used for day-ahead and hour-ahead market accounting and as input for day-ahead and hour-ahead transfer capability analysis of scheduled interchange transactions and development of day-ahead and hour-ahead capacity and energy resource schedules. As such, it may allow for more efficient communication among balancing authorities during operational planning periods. However, in 2008, a WECC task force expressed concern that the “e-Tag and communications processes are time consuming and cumbersome when scheduling and tagging the large amounts of energy required to

recover from system emergencies, particularly in mid-hour.”<sup>38</sup> Although adoption of the e-tagging system may result in more efficient communication among transmission operators and balancing authorities for day-ahead and hour-ahead scheduling, this fact alone is not sufficient to justify the potential reliability impacts involved with extending the reserve restoration period.

30. The Commission’s action in this proceeding does not create a “one-way ratchet” for the development of regional Reliability Standards. In specific circumstances, the Commission could approve retirement of a more stringent regional requirement if the Regional Entity demonstrates that the continent-wide Reliability Standard is sufficient to ensure the reliability of that region. In this case, however, WECC argued only three years earlier that the added stringency of the current regional Reliability Standard was critical to the reliable operation of the Western Interconnection.<sup>39</sup> We find that WECC

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<sup>38</sup>WECC Disturbance Task Force, *PacifiCorp East February 14, 2008 Detailed Disturbance Report* stated in Conclusion 17 (Aug. 2008) available at <http://www.wecc.biz/committees/BOD/081308/Lists/Agendas/1/PacifiCorp%20East%20Disturbance%20Board%20presentation%20Aug%2008%20Final.pdf>.

<sup>39</sup> In its letter requesting approval of the current regional Reliability Standards WECC states:

The WECC Operating Committee thereafter undertook a comprehensive review of all WECC criteria, policies, and guidelines in an effort to identify all unique (i.e., those not in NERC standards) and essential (i.e., necessary to protect WECC reliability) criteria that it believed critical to the reliability of the Western

(continued...)

provided insufficient technical detail and analysis for us to make a reasoned determination that the proposed requirement will adequately protect the reliability of the region. Regional Entities have the discretion to develop regional Reliability Standards and implement changes as understanding grows and experience is gained without concern that the Commission will always hold them to their more stringent requirements in all circumstances regardless of the provided justification. The Commission will evaluate such proposed changes, including those to a less stringent state, on their merit so long as adequate reliability is maintained. In this instance, given WECC's prior statements and its own analysis that such an extended restoration period could lead to major system disturbances, WECC has failed to demonstrate that its proposal will maintain adequate reliability, and therefore has failed to demonstrate that its proposal is just, reasonable, and in the public interest. Consequently, we remand this proposal.

**C. Calculation of Minimum Contingency Reserve**

31. NERC's Disturbance Control Standard, continent-wide Reliability Standard BAL-002-0, requires each balancing authority or reserve sharing group, at a minimum, to maintain at least enough contingency reserve to cover the most severe single

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Interconnection. The Operating Committee concluded that eight regional standards, proposed for adoption here, are of the highest priority.”

NERC, Request for Approval of Regional Reliability Standards, Docket No. RR07-11-000, at 4 (filed March 26, 2007) (NERC 2007 Petition).

contingency. Similarly, requirement WR1(a)(ii) of WECC's current WECC-BAL-STD-002-0 requires balancing authorities to maintain a contingency reserve of spinning and non-spinning reserves (at least half of which must be spinning), sufficient to meet the NERC Disturbance Control Standard, BAL-002-0, equal to the greater of: (1) the loss of generating capacity due to forced outages of generation or transmission equipment that would result from the most severe single contingency; or (2) the sum of five percent of load responsibility served by hydro generation and seven percent of the load responsibility served by thermal generation. In approving the regional BAL-STD-002-0 Reliability Standard, the Commission noted that the regional Reliability Standard is more stringent than the NERC Reliability Standard, BAL-002-0, because WECC requires a more stringent minimum reserve requirement than the continent-wide requirement.

32. As proposed, Requirement R1 of BAL-002-WECC-1 would require each reserve sharing group or balancing authority that is not a member of a reserve sharing group to maintain a minimum contingency reserve. NERC contends that the proposed minimum contingency reserve amount is more stringent than that required by the continent-wide Reliability Standard.<sup>40</sup> NERC explains that, whereas Requirement R3.1 of BAL-002-0 requires that each balancing authority or reserve sharing group carry, at a minimum, at least enough contingency reserve to cover the most severe single contingency, proposed

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<sup>40</sup> NERC Petition at 9.

Requirement R1.1 of BAL-002-WECC-1 requires that each balancing authority or reserve sharing group maintain, as a minimum, contingency reserves equal to the loss of the most severe single contingency or an amount of reserve equal to the sum of three percent of the load (generation minus station service minus net actual interchange) and three percent of net generation (generation minus station service).<sup>41</sup>

### **NOPR Proposal**

33. The Commission proposed to find that the eight hours of data provided by WECC in its initial filing is insufficient to demonstrate that the proposed minimum contingency reserve requirements are sufficiently stringent to ensure that entities within the Western Interconnection will meet the requirements of NERC's continent-wide Disturbance Control Standard, BAL-002-0. The Commission noted that, in its March 2007 petition proposing the currently effective regional Reliability Standard, NERC stated that the eight proposed regional Reliability Standards "were critical to maintaining reliability within the Western Interconnection."<sup>42</sup> The Commission expressed concern that the proposed regional Reliability Standard was less stringent than the current regional Reliability Standard and that NERC had not demonstrated that the proposed regional

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<sup>41</sup> *Id.* at 14.

<sup>42</sup> NERC 2007 Petition at 4.

requirements were sufficient to meet the requirements of NERC's continent-wide Disturbance Control Standard, BAL-002-0.

34. Although the proposed Reliability Standard offers some added clarity by eliminating reference to the term "load responsibility" and including renewable energy resources in the calculation of contingency reserves, the Commission proposed to find that NERC and WECC did not provide sufficient technical justification to support the proposed revised method for calculating contingency reserves. Thus, the Commission proposed to remand BAL-002-WECC-1 so that WECC could develop additional support and make modifications as appropriate for a future proposal.

### **Comments**

35. Several commenters argue that the proposed calculation of minimum contingency reserve levels is more stringent than the continent-wide NERC requirements under BAL-002-0.<sup>43</sup> WECC comments that the Commission has failed to explain how the proposed regional Reliability Standard, which sets minimum contingency reserve level as the greater of the most severe single contingency or a calculation of net generation and load, could be less stringent than the continent-wide requirement, which sets a minimum contingency reserve level as equal to the most severe single contingency. NERC,

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<sup>43</sup> *E.g.*, WECC, NERC, Bonneville, Idaho Power, NV Energy, SCE, WIRAB, and Xcel.

Bonneville, Idaho Power, NV Energy, SCE, WIRAB, and Xcel all agree that the proposed regional requirement for calculating minimum contingency reserve levels is more stringent than the current continent-wide requirement. NERC adds that, in addition to including a more stringent calculation of minimum reserve levels, the proposed regional Reliability Standard is more stringent than the current continent-wide Reliability Standard because it includes a requirement that half of the contingency reserves must immediately and automatically respond proportionally to frequency deviations, e.g., through the action of a governor or other control system. Moreover, WECC points out that nothing in the proposed Reliability Standard excuses any balancing authority or reserve sharing group from satisfying the requirements of the continent-wide Reliability Standard BAL-002-0.

36. Several commenters argue that approval of the proposed Reliability Standard does not require any more technical justification to support the proposed calculation of minimum contingency reserve levels. WECC notes that the currently approved regional Reliability Standard was established through negotiations in the 1960s, and was based on engineering judgment, rather than on technical studies or simulations. Bonneville adds that the Commission did not require extensive data support when it approved the current regional Reliability Standard. NV Energy admits that NERC has provided insufficient data with respect to whether the requested revision is just and reasonable and that data may suggest that the proposed calculation may allow responsible entities to carry less

contingency reserves than currently required under the existing regional Reliability Standard. Nevertheless, NV Energy argues that the Commission should approve the proposed Reliability Standard without requiring any further data because reserve levels required under the proposed Reliability Standard will be equal to or greater and, thus, more stringent than reserve levels required under the continent-wide Reliability Standard.

37. Although WECC argues that it should not be required to provide any further technical justification, along with its NOPR comments WECC provided additional data from a frequency responsive reserve study as support for the proposed regional Reliability Standard. WECC states that the summary of data demonstrates that, based on stability simulations applied to varying load scenarios, a minimum of 2,400 MW of response reserve is necessary to prevent underfrequency load shedding. Based on a review of all hours during 2007-2008, WECC contends that the proposed regional Reliability Standard would result in at least 2,927 MW of automatically responsive reserves; more than 500 MW above the amount required for stability purposes.

38. Powerex and Puget Sound argue that the data provided by WECC in the NERC Petition are insufficient to support the proposed Reliability Standard and support the Commission's proposed remand. Puget Sound contends that WECC's reliance on only eight hours of data to support the proposed standard was unreasonable and arbitrary and, therefore, the Commission could not reasonably approve the proposed Reliability Standard. Powerex argues that the eight hours of data provided by WECC in the NERC



Petition is insufficient to demonstrate that the proposed minimum contingency reserve requirements are sufficiently stringent to ensure that entities within the Western Interconnection will meet the requirements of the continent-wide Reliability Standard. Powerex reiterates a concern that it expressed during the standard development process that the proposed regional Reliability Standard assumes the existence of a liquid ancillary service market when no such market exists in WECC. Powerex comments that the proposed standard shifts the operating reserve responsibility away from the source to the load and will, thereby, result in significant increases in operating reserve requirements of a number of jurisdictions that are primarily load-based and will, therefore, require them to procure operating reserves.

### **Commission Determination**

39. We will accept WECC's proposal on this issue. We believe that WECC's proposed calculation of minimum contingency reserves is more stringent than the national requirement and could be part of a future proposal that the Commission could find to be just, reasonable, not unduly discriminatory or preferential, and in the public interest. In the NERC Petition for approval of the proposed regional Reliability Standard, WECC provided technical studies covering eight hours from each of the four operating seasons (summer, fall, winter, and spring, both on and off-peak). WECC acknowledges that this data illustrates that the methodology in the proposed regional Reliability Standard reduces the total reserves required in the Western Interconnection for each of

the eight hours assessed when compared with the methodology in the current regional Reliability Standard.<sup>44</sup> However, WECC also states that the proposed regional Reliability Standard does not excuse “any non-performance with the continent-wide Disturbance Control Standard,” which requires each balancing authority or reserve sharing group to activate sufficient contingency reserve to comply with the Disturbance Control Standard.<sup>45</sup> WECC’s proposal would require reserves equal to the greater of: (i) the most severe single contingency; or (ii) the sum of three percent of the load and three percent of net generation. Moreover, the deliverability of these contingency reserves would continue to be assured under Requirement R7 of Reliability Standard TOP-002. Any lack of deliverability would violate TOP-002 regardless of whether the amount of contingency reserves is based on WECC’s current requirement or its proposed requirement.

40. Should WECC resubmit its proposed calculation of minimum contingency reserves as part of its response to our remand on the issue of the restoration period, NERC and/or WECC could buttress its proposal with audits specifically focused on contingency reserves and whether balancing authorities are meeting the adequacy and

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<sup>44</sup> See NERC Petition, Exhibit C at 1 (“The estimated impact of these changes to the required level of reserves in the WECC is a reduction of 650 MWs or less, a decrease of approximately 9 [percent] at most.”).

<sup>45</sup> WECC May 24, 2010 Comments at 6 n.7.

deliverability requirements. This auditing could provide additional assurance to the Commission that the proposed requirement is just, reasonable, and in the public interest. This auditing also could address the concerns raised by some entities in WECC that the original eight hours of data provided in NERC's petition is insufficient to demonstrate that the proposed minimum contingency reserve requirements are sufficiently stringent to ensure that entities within the Western Interconnection will meet the requirements of NERC's continent-wide Disturbance Control Standard, BAL-002-0.<sup>46</sup> Thus, the auditing could provide adequate technical justification to support the proposed modification.

41. In response to Powerex's concerns, we believe that a calculation of minimum contingency reserves that is based on three percent of net generation and three percent of net load would fairly balance the responsibilities of contingency reserve providers with the financial obligations of those who would benefit most from those services. Under the current regional Reliability Standard, the total contingency reserve that a balancing authority must maintain is based only on generating resources. By contrast, under the proposed requirement, the total contingency reserve that a balancing authority must maintain is based on a combination of the generating resources and the demand served within a balancing authority footprint. We agree with NERC that the equal split between

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<sup>46</sup> See Powerex Comments at 4; Puget Sound Comments at 2.

load and generation represents a reasonable balance to moderate shifts in contingency reserve responsibility and costs among the applicable entities.<sup>47</sup>

**D. Use of Firm Load to Meet Contingency Reserve Requirement**

42. Requirement R3 of proposed BAL-002-WECC-1 would require that each reserve sharing group or balancing authority use certain types of reserves that must be fully deployable within ten minutes of notification to meet their contingency reserve requirement. Requirement R3.6 of Reliability Standard BAL-002-WECC-1 would allow entities to use “Load, other than Interruptible Load, once the Reliability Coordinator has declared a capacity or energy emergency.”<sup>48</sup>

**NOPR Proposal**

43. In its NOPR, the Commission proposed to find that Requirement R3.6 is not technically sound because it would allow balancing authorities and reserve sharing groups within WECC to use firm load to meet their minimum contingency reserve requirements “once the Reliability Coordinator has declared a capacity or energy emergency,” thus creating the possibility that firm load could be shed due to the loss of a

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<sup>47</sup> NERC Petition at 18.

<sup>48</sup> BAL-002-WECC-1, Requirement R3.6.

single element on the system.<sup>49</sup> The Commission stated that the currently effective regional Reliability Standard does not allow the use of firm load to meet minimum contingency reserve levels.

### **Comments**

44. WECC, supported by Bonneville, Idaho Power, and SCE, contends that the proposed regional Reliability Standard treats firm load no differently than the continent-wide Reliability Standard. WECC states that the proposed regional Reliability Standard permits the use of load, other than interruptible load, to meet a contingency only if “the Reliability Coordinator has declared a capacity or energy emergency.”<sup>50</sup> By contrast, WECC comments, the continent-wide Reliability Standard provides that contingency reserve may be met by Operating Reserve-Spinning and Operating Reserve-Supplemental, which include “load fully removable from the system within the Disturbance Recovery Period following the contingency event” to be used to meet contingencies.<sup>51</sup> WECC points out that the continent-wide Reliability Standard does not

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<sup>49</sup> *Citing* Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 324 (identifying guidelines for what constitutes a just and reasonable Reliability Standard).

<sup>50</sup> BAL-002-WECC-1, Requirement R3.6.

<sup>51</sup> *See* NERC Glossary, *available at* [http://www.nerc.com/docs/standards/rs/Glossary\\_of\\_Terms\\_2010April20.pdf](http://www.nerc.com/docs/standards/rs/Glossary_of_Terms_2010April20.pdf).

refer to the declaration of an emergency. For the same reason, Idaho Power and Xcel state that the proposed provisions related to the use of firm load to meet contingency reserve requirements are more stringent than the continent-wide standards. They contend that, unlike the continent-wide Reliability Standard, the proposed regional Reliability Standard requires the declaration of an emergency prior to utilizing firm load to meet contingency reserve requirements.

45. Idaho Power comments that if balancing authorities are unable to count firm load towards contingency reserve requirements, balancing authorities may have no choice but to shed firm load to remain in compliance with the continent-wide Reliability Standard BAL-002-0. Idaho Power explains that Requirement R6.2 of Reliability Standard EOP-002-2.1 requires a balancing authority to deploy all available operating reserves if it cannot meet the Disturbance Control Standard. If the balancing authority deploys all available operating reserves, including interruptible loads pursuant to Reliability Standard EOP-002-2.1, but cannot declare firm load interruptible to satisfy contingency reserve requirements, Idaho Power contends that the balancing authority may have no choice but to shed firm load to maintain compliance with the continent-wide Reliability Standard BAL-002. Thus, Idaho Power argues that not all emergencies are created equal and the flexibility to count firm load toward contingency requirements, in limited circumstances, would promote reliability but avoid unnecessary outages.

46. WECC also states that nothing in the proposed standard directs any entity to take action that would violate the requirements relating to alert levels prescribed in EOP-002-2.1. Bonneville agrees and states that the Commission's concern is misplaced because the proposed Reliability Standard does not authorize an entity to interrupt firm load for contingency reserves during EOP-002-2.1 energy emergency alerts 1 and 2. If the Commission believes that the proposed Reliability Standard should further qualify the circumstances under which loads may be used for contingency reserves, WECC contends that the issue should be addressed in a manner and at a time that does not preclude approval of the proposed regional Reliability Standard. WECC adds that it is prepared to participate in any efforts intended to address the Commission's concerns in this regard.

47. NERC agrees with WECC that a reliability coordinator must declare a capacity or energy emergency before firm load could be considered to maintain contingency reserves but also agrees with the Commission that greater specificity of the appropriate Energy Emergency Alert (EEA) level that must be declared would be helpful. Puget Sound argues that the proposed language could be interpreted to allow the use of firm load in a manner that is inconsistent with EOP-002-2.1. CDWR comments that reliability planning should not consider shedding firm loads as a contingency reserve. CDWR contends that balancing authority should plan for load interruption only if a customer voluntarily agrees to that specific use of its loads, and only upon clear terms and conditions.

### **Commission Determination**

48. We will accept WECC's proposal on this issue. The Commission finds that, similar to the current continent-wide Reliability Standard, the proposed regional Reliability Standard does not allow balancing authorities or reserve sharing groups to curtail firm load except in compliance with NERC's Reliability Standard EOP-002-2.1.

49. The continent-wide Reliability Standard, BAL-002 does not contemplate the use of firm load as contingency reserve. In fact, it would be a violation of EOP-002-2.1 if balancing authorities or reserve sharing groups outside of WECC planned to shed firm load before the reliability coordinator issued a level 3 energy emergency alert.<sup>52</sup>

Similarly, although Requirement R3.6 of Reliability Standard BAL-002-WECC-1 would allow balancing authorities and reserve sharing groups to use "Load, other than Interruptible Load, once the Reliability Coordinator has declared a capacity or energy emergency,"<sup>53</sup> these entities would not be authorized to shed firm load unless the applicable reliability coordinator had issued a level 3 energy emergency alert pursuant to EOP-002-2.1. Thus, balancing authorities and reserve sharing groups within WECC are subject to the same restrictions regarding the use of firm load as contingency reserve as

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<sup>52</sup> EOP-002-2.1, Requirement R7

<sup>53</sup> BAL-002-WECC-1, Requirement R3.6.



balancing authorities elsewhere operating under the continent-wide Reliability Standard.

On remand, we direct WECC to develop revised language to clarify this point.

**E. Demand-Side Management as a Resource**

50. In Order No. 693, the Commission directed the ERO to submit a modification to continent-wide Reliability Standard BAL-002-0 that includes a Requirement that explicitly allows that demand-side management be used as a resource for contingency reserves, and clarifies that demand-side management should be treated on a comparable basis so long as it meets similar technical requirements as other resources providing this service.<sup>54</sup> The Commission directed the ERO to list the types of resources that can be used to meet contingency reserves to provide users, owners and operators of the Bulk-Power System a set of options to meet contingency reserves.<sup>55</sup> 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>56</sup> The

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<sup>54</sup> *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, 72 FR 16416 (Apr. 4, 2007), FERC Stats. & Regs. ¶ 31,242, at P 330, *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

<sup>55</sup> *Id.* P 331, 335.

<sup>56</sup> *Id.* P 333.

Commission further clarified that in order for demand-side management to participate, it must be technically capable of providing contingency reserve service, with the ERO determining the technical requirements.<sup>57</sup>

51. In its petition, NERC states that it raised this concern with WECC, and WECC responded that the drafting team wrote the regional Reliability Standard “to permit load, Demand-Side Management, generation, or another resource technology that qualifies as Spinning Reserve or Contingency Reserve to be used as such.” WECC further explained that demand-side management that is deployable within ten minutes is a subset of interruptible load, which is an acceptable type of reserve set forth in proposed Requirement R3.2.<sup>58</sup> WECC previously commented that, in the proposed standard, “Loads and [demand-side management] were not allowed as Spinning Reserve because it is not permitted by the NERC Spinning Reserve definition.”<sup>59</sup>

### **NOPR Proposal**

52. In its NOPR, the Commission stated that the proposed regional Reliability Standard does not explicitly address the use of demand-side management as a resource

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<sup>57</sup> *Id.* P 334.

<sup>58</sup> NERC Petition at 40.

<sup>59</sup> NERC Petition at Exhibit C (Record of Development of Proposed Reliability Standard) WECC’s Written Response to NERC’s Written Comments, August 13, 2008 at page 4.

for contingency reserves. Accordingly, the Commission proposed to direct WECC to develop a modification to BAL-002-WECC-1 that explicitly provides that demand-side management that is technically capable of providing this service may be used as a resource for contingency reserves. Consistent with the Commission's directive in Order No. 693, the Commission explained that the modification should list the types of resources, including demand-side management, which can be used to meet contingency reserves. The Commission also stated that the modification should ensure comparable treatment of demand-side management with conventional generation or any other technology and 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.

53. In addition, the Commission noted a conflict related to the definition of Spinning Reserve as it is used in the proposed regional Reliability Standard. The Commission stated that Requirement R3.1 refers to the NERC Glossary definition of Spinning Reserve, which omits the use of demand-side management or other technologies that could be used as a resource because it limits acceptable Spinning Reserve resources to generation resources. The Commission proposed to direct WECC to develop a modification to the proposed regional Reliability Standard replacing the term Spinning Reserve with Operating Reserve-Spinning, which includes as part of the definition of Operating Reserve, "load fully removable from the system within the Disturbance

Recovery Period following the contingency event.” Since the term Spinning Reserve was not used in other Reliability Standards, the Commission proposed to direct the ERO to remove the term from the NERC Glossary upon approval of a modified Reliability Standard using Operating Reserve-Spinning.

### **Comments**

54. WECC, supported by NERC, Bonneville, CAISO, Idaho Power, and SCE, contends that the proposed regional Reliability Standard is inclusive of demand-side management as a resource to be used in the calculation of contingency reserve because it provides for the use of Interruptible Load for contingency reserve. WECC points out that the NERC Glossary defines Interruptible Load as “demand that the end-use customer makes available to its load-serving entity via contract or agreement for curtailment.”<sup>60</sup> Nevertheless, if the Commission issues a remand, CAISO urges the Commission to provide NERC an opportunity to resubmit BAL-002-WECC-1 to address any definitional concerns within 90 days.

55. Xcel comments that the Reliability Standard should not be more explicit about the inclusion of demand-side management as a resource because the term demand-side management encompasses many types of technologies and services, including reduction

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<sup>60</sup> See NERC Glossary available at [http://www.nerc.com/docs/standards/rs/Glossary\\_of\\_Terms\\_2010April20.pdf](http://www.nerc.com/docs/standards/rs/Glossary_of_Terms_2010April20.pdf).

of energy consumption by use of high-efficiency light bulbs. If demand-side management is more explicitly included in the proposed regional Reliability Standard, Xcel contends that such a revision might cause entities that are working to provide value to the end-use customers to claim that a customer could get revenue by providing reserves.

56. By contrast, Puget Sound and CDWR comment that they agree with the Commission that technically qualified demand-based resources – as well as other qualified non-generation resources such as energy storage devices – should be allowed to provide ancillary services. CDWR suggests that, if Spinning Reserve is meant to connote two products – a contingency reserve and a frequency regulation reserve – then consideration should be given to better defining the services and the associated technical criteria. Nevertheless, CDWR comments that demand-based resources that agree to interruption for reliability purposes should receive reduced charges for lesser quality services, an exemption from charges associated with the same service that the demand-based resources are providing, and compensation for service they provide.

57. Concerning the Commission's proposal to direct the ERO to remove the term Spinning Reserve upon approval of a modified regional Reliability Standard, NERC points out that there are two definitions for Spinning Reserve; one from NERC, the other from WECC. NERC suggests that the Commission retain the NERC-defined term and

retire the WECC term. NERC states that the proposed standard uses the NERC-defined term in Requirements R1, R2, and R3.

58. Several commenters oppose the removal of the term Spinning Reserve from the NERC Glossary.<sup>61</sup> Puget Sound states that retaining the term in the NERC Glossary is helpful to the development of a capacity/reserves market by facilitating the purchase and sale of spinning capacity that is not contingency-based. Similarly, NV Energy states that the term Spinning Reserve is useful because it describes a type of reserve that must be synchronized, unloaded generating capacity, as this is the only product that can provide the essential service of frequency and governor response under dynamic system conditions and disturbances. WSPP argues that the Commission's proposal is based upon a faulty understanding of the relationship between the terms Operating Reserve-Spinning and Spinning Reserve. WSPP and MISO agree that Spinning Reserve is used in the definition of Operating Reserve, which appears more than fifty times in the NERC Reliability Standards. WSPP further explains that Spinning Reserve can be used for the spinning component of Operating Reserve but also for other critical system requirements. In addition, MISO argues, generally, that it is not appropriate for the Commission to effect changes to the continent-wide NERC standards by proposing a modification to the

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<sup>61</sup> *E.g.*, MISO, Puget Sound, WSPP, and Xcel.

NERC Glossary within the context of a proceeding addressing a regional Reliability Standard.

59. With respect to the Commission's proposed revisions of the definitions of the terms Operating Reserve-Spinning and Operating Reserve-Supplemental, NERC agrees that greater clarity is necessary regarding the meaning of "load fully removable from the system." NERC states, however, that these modifications must be made through NERC's Reliability Standard Development Process and are, in fact, currently being addressed in Project 2007-05 Balancing Authority Controls, which is currently revising Reliability Standard BAL-002-0, as well as other standards.<sup>62</sup>

#### **Commission Determination**

60. We find that the proposed regional Reliability Standard does not provide that demand-side management that is technically capable of providing this service may be used as a resource for contingency reserves. The WECC definition of Spinning Reserve, like the NERC definition of the same term, is limited to "unloaded generation which is synchronized and ready to serve additional demand." Thus, neither the WECC nor the NERC definitions of Spinning Reserve are inclusive of demand-side management as a

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<sup>62</sup> As of July 28, 2010, this project has been merged with Project 2007-18 – Reliability-based Controls and is now listed as new Project 2010-14 – Balancing Authority Reliability-based Control. The new project page is available at [http://www.nerc.com/filez/standards/Project2010-14\\_Balancing\\_Authority\\_RBC.html](http://www.nerc.com/filez/standards/Project2010-14_Balancing_Authority_RBC.html).

resource.<sup>63</sup> Nevertheless, WECC argues that the proposed regional Reliability Standard is inclusive of demand-side management as a resource for contingency reserves because it lists interruptible load as an available resource for contingency reserve. The definition of interruptible load, however, is not inclusive of all forms of demand-side management.<sup>64</sup> NERC defines demand-side management as “all activities or programs undertaken by Load-Serving Entity or its customers to influence the amount or timing of electricity they use.”<sup>65</sup> This could include interruptible load but, as Xcel points out, demand-side management may encompass the use of many types of technologies and services. For example, according to the NERC Glossary, demand-side management includes controllable load, termed Direct Control Load Management, which is defined as demand-side management that is under the direct control of the system operator but does

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<sup>63</sup> In the transmittal letter of its compliance filing to Order No. 719, CAISO explained that demand-side management resources cannot currently provide regulation or spinning reserve services in its markets because of WECC’s definitions of regulation and spinning reserve, which are limited to generation resources. CAISO, Compliance Filing, Docket No. ER09-1048-000, at 28-30 (April 28, 2009).

<sup>64</sup> NERC defines Interruptible Load as “Demand that the end-use customer makes available to its Load-Serving Entity via contract or agreement for curtailment.” NERC Glossary *available at* [http://www.nerc.com/docs/standards/rs/Glossary\\_of\\_Terms\\_2010April20.pdf](http://www.nerc.com/docs/standards/rs/Glossary_of_Terms_2010April20.pdf).

<sup>65</sup> NERC Glossary *available at* [http://www.nerc.com/docs/standards/rs/Glossary\\_of\\_Terms\\_2010April20.pdf](http://www.nerc.com/docs/standards/rs/Glossary_of_Terms_2010April20.pdf).



not include interruptible load.<sup>66</sup> Thus, by simply listing interruptible load, the proposed regional Reliability Standard is not sufficiently inclusive of demand-side management as a resource.<sup>67</sup>

61. On remand, the Commission hereby adopts its NOPR proposal and directs the WECC to develop modifications to the proposed regional Reliability Standard that explicitly provide that demand-side management technically capable of providing this service may be used as a resource for both spinning and non-spinning contingency reserves.<sup>68</sup> Consistent with the Commission's directive in Order No. 693, the modification should list the types of resources, including demand-side management, which can be used to meet contingency reserves.<sup>69</sup> The modification also should ensure comparable treatment of demand-side management with conventional generation or any

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<sup>66</sup> *Id.*

<sup>67</sup> We also note that WECC's explanation that demand-side management that is deployable within ten minutes is a subset of interruptible load is not reflected in the definition of Interruptible Load.

<sup>68</sup> In Order No. 693, the Commission clarified that, in order for demand-side management to participate as a resource for contingency reserves, it must be technically capable of providing contingency reserve service. For example, not every end-user who curbs electricity usage is technically capable of providing contingency reserve service. The Commission expects that the ERO would determine what technical requirements demand-side management would need to meet to provide contingency reserves. Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 334.

<sup>69</sup> Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 333.

other technology and 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. For example, consistent with our determinations in Order No. 693, the modification could replace the term Spinning Reserve with Operating Reserve-Spinning and Non-Spinning Reserve with Operating Reserve-Supplemental, since these glossary definitions are inclusive of demand-side management, including controllable load, in contrast to the current terms used in the proposed regional Reliability Standard.<sup>70</sup>

62. As commenters have pointed out, the term Spinning Reserve is used in the definition of Operating Reserve and in service agreements by and among certain WECC entities. Therefore, the Commission will not adopt its proposal to direct the ERO to remove the term from the NERC Glossary. However, as NERC points out WECC has maintained its own definition of the term Spinning Reserve. We find no substantial difference between the two terms. Both terms refer to “unloaded generation that is synchronized and ready to serve additional demand.”<sup>71</sup> In its order approving WECC’s current regional Reliability Standard, the Commission determined that regional definitions should conform to the definitions set forth in the NERC Glossary, unless a

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<sup>70</sup> *Id.* P 1896.

<sup>71</sup> NERC Glossary, *available at* [http://www.nerc.com/docs/standards/rs/Glossary\\_of\\_Terms\\_2010April20.pdf](http://www.nerc.com/docs/standards/rs/Glossary_of_Terms_2010April20.pdf).

specific deviation has been justified.<sup>72</sup> WECC has not justified the need for a separate, regional definition of Spinning Reserve. Accordingly, we direct WECC to remove this regional definition from the NERC Glossary.

## F. Miscellaneous

### Comments

63. In its petition, NERC contends that the industry will benefit from the improved clarity of the proposed regional Reliability Standard. Among its revisions, NERC presents a proposal from WECC for an interpretation of the term “Load Responsibility.”<sup>73</sup> In the NOPR, the Commission stated its belief than any confusion regarding the term “Load Responsibility” has been addressed by WECC and therefore does not have a reliability impact. Xcel states that it agrees that WECC’s interpretation is an improvement and that the standard is clearer without the term. Nevertheless, Xcel

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<sup>72</sup> *North American Electric Reliability Corp.*, 119 FERC ¶ 61,260 at P 54.

<sup>73</sup> WECC’s interpretation of “Load Responsibility,” which was approved by the WECC Board of Directors September 7, 2007, places the responsibility on the balancing authorities to determine the amount of and assure that adequate contingency reserves are provided. *See* WECC Interpretation of Load Responsibility (Sept. 7, 2007), *available at* <http://www.wecc.biz/Standards/Interpretations/Interpretation%20of%20Load%20Responsibility.pdf>. Likewise, the current regional Reliability Standard places the responsibility on the balancing authorities to determine the amount of contingency reserves and assure that adequate contingency reserves are provided.

comments that more guidance on application is needed from both WECC and FERC before the western markets may operate efficiently.

64. If the Commission decides to remand the proposed regional Reliability Standard, the QF Parties ask the Commission to direct WECC to define the term “net generation.” The QF Parties explain that the calculation of the amount of contingency reserves in the proposed standard is based, in part, on the amount of net generation, which is not defined. The QF Parties contend that, consistent with Commission precedent, the definition of net generation should not include generation used to serve load behind the meter.<sup>74</sup>

65. Regarding the applicability of the proposed regional Reliability Standard, NV Energy expresses concern that it does not assign any responsibility or obligations for generator owners and generator operators. NV Energy states that a balancing authority does not have ownership or operational control over significant shares of generating resources within its footprint. Thus, NV Energy contends, a balancing authority may be required to carry a disproportionate share of the contingency reserve obligation within the Western Interconnection. For this reason, NV Energy asks the Commission to direct WECC to address this issue on remand.

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<sup>74</sup> *Citing*, Opinion No. 464, Docket No. ER98-997-000, at P 11 *et seq.*, 38-40 (August 12, 2003).

### **Commission Determination**

66. The proposed regional Reliability Standard offers certain improvements over the current regional Reliability Standard as commenters point out. Nevertheless, for the reasons discussed above, we must remand the proposed regional Reliability Standard to the ERO. On remand, we direct WECC to consider the concerns raised by the QF Parties and NV Energy.

### **III. Information Collection Statement**

67. The Office of Management and Budget (OMB) regulations require that OMB approve certain reporting and recordkeeping (collections of information) imposed by an agency.<sup>75</sup> The information contained here is also subject to review under section 3507(d) of the Paperwork Reduction Act of 1995.<sup>76</sup> By remanding the proposed Reliability Standard the Commission is maintaining the status quo until future revisions to the Reliability Standard are approved by the Commission. Thus, the Commission's action does not add to or increase entities' reporting burden.

### **IV. Environmental Analysis**

68. The Commission is required to prepare an Environmental Assessment or an Environmental Impact Statement for any action that may have a significant adverse effect

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<sup>75</sup> 5 C.F.R. 1320.11.

<sup>76</sup> 44 U.S.C. 3507(d).

on the human environment.<sup>77</sup> The Commission has categorically excluded certain actions from this requirement as not having a significant effect on the human environment. Included in the exclusion are rules that are clarifying, corrective, or procedural or that do not substantially change the effect of the regulations being amended.<sup>78</sup> The actions directed herein fall within this categorical exclusion in the Commission's regulations.

#### **V. Regulatory Flexibility Act**

69. The Regulatory Flexibility Act of 1980 (RFA)<sup>79</sup> generally requires a description and analysis of final rules that will have significant economic impact on a substantial number of small entities. The RFA mandates consideration of regulatory alternatives that accomplish the stated objectives of a final rule and that minimize any significant economic impact on a substantial number of small entities. The Small Business Administration's Office of Size Standards develops the numerical definition of a small business.<sup>80</sup> For electric utilities, a firm is small if, including affiliates, it is primarily engaged in the transmission, generation and/or distribution of electric energy for sale and

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<sup>77</sup> *Regulations Implementing the National Environmental Policy Act of 1969*, Order No. 486, FERC Stats. & Regs. ¶ 30,783 (1987).

<sup>78</sup> 18 C.F.R. 380.4(a)(2)(ii).

<sup>79</sup> 5 U.S.C. 601-612.

<sup>80</sup> *See* 13 C.F.R. 121.201.

its total electric output for the preceding twelve months did not exceed four million megawatt hours. The RFA is not implicated by this final rule because by remanding the proposed Reliability Standard the Commission is maintaining the status quo until future revisions to the Reliability Standard are approved by the Commission.

## **VI. Document Availability**

70. In addition to publishing the full text of this document in the Federal Register, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the internet through FERC's Home Page (<http://www.ferc.gov>) and in FERC's Public Reference Room during normal business hours (8:30 a.m. to 5:00 p.m. Eastern time) at 888 First Street, NE, Room 2A, Washington DC 20426.

71. From FERC's Home Page on the Internet, this information is available on eLibrary. The full text of this document is available on eLibrary in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this document in eLibrary, type the docket number excluding the last three digits of this document in the docket number field.

72. User assistance is available for eLibrary and the FERC's website during normal business hours from FERC Online Support at (202) 502-6652 (toll free at 1-866-208-3676) or email at [ferconlinesupport@ferc.gov](mailto:ferconlinesupport@ferc.gov), or the Public Reference Room at (202)

502-8371, TTY (202)502-8659. E-mail the Public Reference Room at [public.referenceroom@ferc.gov](mailto:public.referenceroom@ferc.gov).

**VII. Effective Date and Congressional Notification**

73. This final rule shall become effective [insert date that is 30 days from publication in **Federal Register**]. The Commission has determined, with the concurrence of the Administrator of the Office of Information and Regulatory Affairs of OMB, that this rule is not a “major rule” as defined in section 351 of the Small Business Regulatory Enforcement Fairness Act of 1996.

List of subjects in 18 CFR Part 40

Electric power, Electric utilities, Reporting and recordkeeping requirements.

By the Commission.

( S E A L )

Kimberly D. Bose,  
Secretary.



## Appendix A

### List of Commenters

<b>Commenter Name</b>	<b>Abbreviation</b>
Western Electricity Coordinating Council	WECC
North American Electric Reliability Corp.	NERC
Bonneville Power Administration	Bonneville
California Independent System Operator Corp.	CAISO
California Dept of Water Resources, State Water Project	CDWR
Idaho Power Co.	Idaho Power
Midwest Independent System Operator, Inc.	MISO
Powerex Corp.	Powerex
Puget Sound Energy, Inc.	Puget Sound
Cogeneration Association of California and the Energy Producers and Users Coalition	QF Parties
Sempra Generation	Sempra
Sierra Pacific Power Co. and Nevada Power Co.	NV Energy
Southern California Edison Co.	SCE
Western Interconnection Regional Advisory Body	WIRAB
WSPP Inc.	WSPP
Xcel Energy Services Inc.	Xcel