DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

18 CFR Part 40

[Docket No. RM09–9–000]

Version One Regional Reliability Standards for Facilities Design, Connections, and Maintenance; Protection and Control; and Voltage and Reactive

December 17, 2010.

AGENCY: Federal Energy Regulatory Commission, DOE.

ACTION: Notice of proposed rulemaking.

SUMMARY: Under section 215 of the Federal Power Act, the Commission proposes to approve four revised regional Reliability Standards 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. These regional Reliability Standards have been designated by WECC as FAC–501–WECC–1—Transmission Maintenance, PRC–004–WECC–1—Protection System and Remedial Action Scheme Misoperation, VAR–002–WECC–1—Automatic Voltage Regulators, and VAR–501–WECC–1—Power System Stabilizer. Proposed FAC–501–WECC–1 addresses transmission maintenance for specified transmission paths in the Western Interconnection. Proposed PRC–004–WECC–1 addresses the analysis of misoperations that occur on transmission and generation protection systems and remedial action schemes in the Western Interconnection. Proposed VAR–002–WECC–1 is meant to ensure that automatic voltage regulators remain in service on synchronous generators and condensers in the Western Interconnection. Proposed VAR–501–WECC–1 is meant to ensure that power system stabilizers remain in service on synchronous generators in the Western Interconnection. In addition, under section 215(d)(5) of the Federal Power Act, the Commission proposes to direct the Western Electricity Coordinating Council, working through its standards development process, to develop modifications to these to regional Reliability Standards to address specific issues, as discussed below.

DATES: Comments are due February 22, 2011.

ADDRESSES: You may submit comments, identified by docket number and in accordance with the requirements posted on the Commission's Web site, *http://www.ferc.gov.* Comments may be submitted by any of the following methods:

- Agency Web Site: Documents created electronically using word processing software should be filed in native applications or print-to-PDF format, and not in a scanned format, at *http://www.ferc.gov/docs-filing/efiling.asp.*
- Mail/Hand Delivery: Commenters unable to file comments electronically must mail or hand-deliver an original copy of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, NE., Washington, DC 20426. These requirements can be found on the Commission's Web site, *see,* e.g., the "Quick Reference Guide for Paper Submissions," *available at http://www.ferc.gov/docs-filing/efiling.asp* or via phone from FERC Online support at (202) 502–6652 or toll-free at 1–866–208–3676.

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SUPPLEMENTARY INFORMATION:

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1. Under section 215 of the Federal Power Act (FPA),[1] the Commission proposes to approve four revised regional Reliability Standards 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.[2] These regional Reliability Standards have been designated by WECC as FAC–501–WECC–1—Transmission Maintenance, PRC–004–WECC–1—Protection System and Remedial Action Scheme Misoperation, VAR–002–WECC–1—Automatic Voltage Regulators, and VAR–501–WECC–1—Power System Stabilizer. Proposed FAC–501–WECC–1 addresses transmission maintenance for specified transmission paths in the Western

[1] 16 U.S.C. 824o (2006).

[2] *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).

Interconnection. Proposed PRC–004–WECC–1 addresses the analysis of misoperations that occur on transmission and generation protection systems and remedial action schemes in the Western Interconnection. Proposed VAR–002–WECC–1 is meant to ensure that automatic voltage regulators remain in service on synchronous generators and condensers in the Western Interconnection. Proposed VAR–501–WECC–1 is meant to ensure that power system stabilizers remain in service on synchronous generators in the Western Interconnection. Under section 215(d)(5) of the Federal Power Act, the Commission proposes to direct WECC, through its standard development process, to develop modifications to these regional Reliability Standards to address specific issues, as discussed below.

2. Related, the Commission also seeks comment on whether it should direct the ERO to develop modifications to the NERC Reliability Standards addressing the use of automatic voltage regulators and power system stabilizers. The Commission's concerns regarding the NERC Reliability Standard are introduced here as they correspond with certain elements of the WECC standards that are the subject of the immediate proceeding. However, any proposal to direct the development of modifications to the NERC Reliability Standards would be addressed in a separate proceeding.

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.[3]

4. Reliability Standards that the ERO proposes to the Commission may include Reliability Standards that are proposed to the ERO by a Regional Entity to be effective in that region.[4] A Regional Entity is an entity that has been approved by the Commission to enforce Reliability Standards under delegated authority from the ERO.[5] When the ERO reviews a regional 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.[6] 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.[7]

5. In Order No. 672, the Commission urged uniformity of Reliability Standards, but recognized a potential need for regional differences.[8] 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 (2) a regional Reliability Standard that is necessitated by a physical difference in the Bulk-Power System.[9]

B. Western Electricity Coordinating Council

6. On April 19, 2007, the Commission accepted delegation agreements between NERC and each of eight Regional Entities.[10] 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 WECC PRC–STD–001–1, PRC–STD–003–1, PRC–STD–005–1, VAR–STD–002a–1, and VAR–STD–002b–1.[11] The Commission directed WECC to develop certain modifications to WECC PRC–STD–001–1, PRC–STD–003–1, PRC–STD–005–1, VAR–STD–002a–1, and VAR–STD–002b–1, as identified by NERC in its filing letter for the current standards.[12] 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.

II. Proposed Regional Reliability Standards

8. On March 25, 2009, NERC submitted a petition (NERC Petition) to the Commission seeking approval of four WECC regional Reliability Standards.[13] The four proposed WECC regional Reliability Standards are designated as FAC–501–WECC–1, PRC–004–WECC–1, VAR–002–WECC–1, and VAR–501–WECC–1.[14] In its petition, NERC explains that the four proposed regional Reliability Standards are meant to replace certain currently approved regional Reliability Standards:

- FAC–501–WECC–1 is intended to replace the current approved PRC–STD–005–1;
- PRC–004–WECC–1 is intended to replace WECC PRC–STD–001–1 and PRC–STD–003–1;
- VAR–002–WECC–1 is intended to replace WECC VAR–STD–002a–1; and
- VAR–501–WECC–1 is intended to replace WECC VAR–STD–002b–1.

NERC states that the NERC board of trustees approved the proposed regional Reliability Standards on October 29, 2008, on the condition that WECC address certain shortcomings raised during the comment periods in the next revision of the Reliability Standards.

9. NERC requests an effective date for FAC–501–WECC–1, VAR–002–WECC–1, and VAR–501–WECC–1 of the first day of the first quarter after Commission approval. For PRC–004–WECC–1, NERC requests an effective date of the first day of the second quarter after approval by the Commission.

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[3] 16 U.S.C. 824o(e)(3).

[4] 16 U.S.C. 824o(e)(4).

[5] 16 U.S.C. 824o(a)(7) and (e)(4).

[6] 18 CFR 39.5 (2010).

[7] 16 U.S.C. 824o(d)(2).

[8] *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 290, *order on reh'g,* Order No. 672–A, 71 FR 19814 (Apr. 18, 2006), FERC Stats. & Regs. ¶ 31,212 (2006).

[9] *Id.* P 291.

[10] *North American Electric Reliability Corp.,* 119 FERC ¶ 61,060, at P 432 (2007).

[11] *North American Electric Reliability Corp.,* 119 FERC ¶ 61,260 (2007).

[12] *Id.*

[13] *See* 18 CFR 39.5(a) (requiring the ERO to submit regional Reliability Standards on behalf of a Regional Entity).

[14] The proposed regional Reliability Standards are not attached to the NOPR. They are, however, available on the Commission's eLibrary document retrieval system in Docket No. RM09–9–000 and are posted on the ERO's Web site, *available at http://www.nerc.com.*

III. Discussion

10. As discussed below, the Commission proposes to approve FAC–501–WECC–1, PRC–004–WECC–1, VAR–002–WECC–1, and VAR–501–WECC–1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. In addition, under section 215(d)(5) of the FPA and section 39.5(f) of our regulations, the Commission proposes to direct WECC to develop certain modifications to further clarify the requirements of the proposed WECC regional Reliability Standards.

A. FAC–501–WECC–1—Transmission Maintenance

11. NERC PRC–005–1 applies to all transmission and generator owners as well as distribution providers that own a transmission protection system. The Reliability Standard is meant to ensure that all transmission and generation protection systems affecting the reliability of the Bulk-Power System are maintained and tested.

12. On June 8, 2007, the Commission approved a WECC regional Reliability Standard that corresponds to the NERC Reliability Standard PRC–005–1.[15] WECC PRC–STD–005–1 applies to transmission owners and operators identified in an attached table titled "Major WECC Transfer Paths in the Bulk Electric System" (WECC Transfer Path Table) and to owners of remedial action schemes identified in the "Major WECC Remedial Action Schemes" table (WECC Remedial Action Schemes Table). WECC PRC–STD–005–1 requires each transmission owner and operator of the specified transmission paths to perform maintenance and inspection on those paths as described by its transmission maintenance and inspection plan. The regional Reliability Standard identifies specific contents that each applicable transmission owner and transmission operator must include in its transmission maintenance and inspection plan. For example, a plan must include the scheduled interval for time-based maintenance, describe maintenance and inspection methods, provide relevant checklists or forms, and provide criteria for assessing the condition of a facility. Each applicable entity must retain all pertinent maintenance and inspection records for at least five years. Further each applicable entity must annually certify to WECC staff that it has developed, documented, and implemented a transmission maintenance and inspection plan.

[15] *North American Electric Reliability Corp.,* 119 FERC ¶ 61,260 at P 95.

WECC and NERC Proposal

13. NERC states that proposed FAC–501–WECC–1 is intended to replace approved WECC PRC–STD–005–1. The proposed regional Reliability Standard would apply to transmission owners that maintain transmission paths listed in the WECC Transfer Path Table, which is no longer an attachment to the Reliability Standard but is maintained on the WECC Web site. Proposed FAC–501–WECC–1 contains three main provisions. Requirement R1 provides that each transmission owner must have a transmission, maintenance, and inspection plan, and each transmission owner must annually review and update as required their transmission maintenance and inspection plan. Requirement R2 states that each transmission owner must include specified maintenance categories [16] when developing their transmission maintenance and inspection plan. Requirement 3 states that each transmission owner must implement and follow their transmission maintenance and inspection plan.

14. NERC recommends approval of FAC–501–WECC–1, stating that the proposed regional Reliability Standard addresses matters that the NERC Reliability Standard does not. Specifically, according to NERC, FAC–501–WECC–1 requires, for specified transmission paths, a highly detailed maintenance and inspection plan for all transmission and substation equipment components, beyond the relay and communication system maintenance and testing required by the corresponding NERC Reliability Standard.[17]

NOPR Proposal

15. The Commission proposes to approve FAC–501–WECC–1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. As explained by NERC, proposed FAC–501–WECC–1 appears to be more stringent, by virtue of its requirement for a highly detailed maintenance and inspection plan, compared to the corresponding NERC Reliability Standard.

16. Further, in approving the currently-effective WECC PRC–STD–005–1, the Commission directed WECC to make certain modifications to the regional Reliability Standard. To address these directives, the proposed regional Reliability Standard no longer references any WECC Forms, and text regarding the Compliance Monitoring Period has been removed. The proposed regional Reliability Standard no longer refers to a regional definition of Disturbance, which conflicted with the definition of Disturbance in the NERC Glossary. Since the term is not included in any of the proposed regional Reliability Standards, the Commission proposes to direct the ERO to remove this regional definition from the NERC Glossary of terms upon Commission approval of FAC–501–WECC–1. The proposed regional Reliability Standard also removes the Sanctions Table and includes Violation Risk Factors, Violation Severity Levels, Measures, and Time Horizons, as directed by the Commission. These revisions appear generally consistent with the Commission's directives, and signify meaningful improvement. Accordingly, we propose to approve FAC–501–WECC–1. We also propose to approve NERC's petition to retire currently-effective WECC PRC–STD–005–1.

17. While we propose to approve FAC–501–WECC–1, we have several concerns regarding the requirements of the proposed regional Reliability Standard that were not adequately addressed in the NERC petition. Below, we discuss our concerns and, in the absence of a satisfactory explanation from WECC, NERC and other commenters, under section 215(d)(5) of the FPA and section 39.5(f) of our regulations, we propose to direct that the Regional Entity develop modifications to the regional Reliability Standard, as discussed below.

WECC Transfer Path Table

18. First, we have a concern regarding the applicability of the proposed regional Reliability Standard. As mentioned above, WECC PRC–STD–005–1 is applicable to transmission owners or operators that maintain transmission paths listed in the WECC Transfer Path Table, which is attached to the regional Reliability Standard. The attachment identifies 40 major transmission paths in the Western Interconnection. By contrast, FAC–501–WECC–1 removes the attachment and, instead, directs transmission owners to the most current WECC Transfer Path Table, which is available on the WECC Web site. The table currently posted on the WECC Web site identifies the same 40 major paths as the attachment to the approved regional Reliability

[16] The maintenance categories to be included in the transmission maintenance and inspection plan are included in Attachment 1 of FAC–501–WECC–1—"Transmission Line and Station Maintenance Details."

[17] NERC Petition at 11, 14.

Standard.[18] However, the Commission is concerned that, by referencing the WECC Transfer Path Table posted on the WECC Web site, the applicability of FAC–501–WECC–1 could change without review and approval by the ERO and the Commission, as required to make effective a modification to a Reliability Standard.

19. The possibility for the applicability of the Reliability Standard to change at any time could create confusion for entities that need to comply as well as any compliance enforcement staff trying to determine which entities are responsible for complying with the Reliability Standard. Under section 215(d)(5) of the FPA, we propose to direct that WECC develop a modification to the Reliability Standard to address our concern. For example, WECC could include its criterion for identifying and modifying major transmission paths listed in the WECC Transfer Path Table and make an informational filing each time it makes a modification to the table. Another option would be for WECC to file its criterion with the Commission and post revised transfer path tables and referenced catalogs on its Web site before they become effective with concurrent notification to NERC and the Commission. Alternatively, the Regional Entity could include the WECC Transfer Path Table as an attachment to the modified Reliability Standard. In this way, the Commission would be able to verify that the Regional Entity is applying the requirements of the regional Reliability Standard in a just and reasonable manner.

System Operating Limits (SOL)

20. Second, the Commission is concerned about WECC's use of the term System Operating limit, as it is defined in the NERC Glossary.[19] Currently, WECC determines transfer capability based on a "rated system path" methodology and the table of Major WECC Transfer Paths and associated catalog identify the facilities that make up each rated system path. For at least ten years, WECC has used the defined term Operating Transfer Capability limits, and not System Operating Limit, to describe transmission limitations. WECC TOP–STD–007–0 defines Operating Transfer Capability limits as:

> * * * the maximum amount of actual power that can be transferred over direct or parallel transmission elements comprising:
> • An interconnection from one Transmission Operator area to another Transmission Operator area; or
> • A transfer path within a Transmission Operator area.
> The net schedule over an interconnection or transfer path within a Transmission Operator area shall not exceed the [operating transfer capability], regardless of the prevailing actual power flow on the interconnection or transfer path.

Unlike a System Operating Limit, the definition of Operating Transfer Capability limits is limited to direct or parallel transmission elements between or within specific transmission operators. Moreover, the rating of a System Operating Limit, which is based on an operating criteria that is either thermally (based on facility ratings) or stability-based (based on transient stability, voltage stability, or system voltage limits) is the first element to calculate in order to determine the Operating Transfer Capability limit rating.

21. Based on the above, it appears that a System Operating Limit is not the same as an Operating Transfer Capability limit. Yet, WECC and NERC believe that the terms can be used interchangeably and that WECC revised the regional Reliability Standard to refer to System Operating Limits to conform its terminology to the NERC Glossary. While we believe using NERC Glossary terminology is generally preferable,[20] we are concerned that, in this instance, the use of a regional definition might be most appropriate.

22. Specifically, the Commission is concerned that the introduction of the NERC Glossary definition of System Operating Limit in Requirement R1 of the proposed regional Reliability Standard could create confusion regarding which transmission owners are required to maintain a transmission maintenance and inspection plan. Requirement R1 of the approved WECC Reliability Standard requires transmission owners to inspect and maintain "all bulk power transmission elements (i.e., lines, stations and rights of way) included as part of the transmission facilities (or required to maintain transfer capability) impacting each of the transmission paths listed * * *."[21] By contrast, Requirement R1 of WECC's proposed regional Reliability Standard would require transmission owners to maintain a transmission maintenance and inspection plan detailing their inspection and maintenance requirements that "*apply to all transmission facilities necessary for System Operating Limits associated with each of the transmission paths* identified in the WECC Transfer Path Table."[22] Facilities that are System Operating Limits associated with transmission paths identified in the WECC Transfer Path Table are not necessarily on paths identified in the WECC Transfer Path Table.

23. Thus, under the proposed language, Requirement R1 could apply to more transmission facilities than identified in the WECC Transfer Path Table. For example, a System Operating Limit for a rated path in the WECC Transfer Path Table could be defined by a facility on a path that is not identified in the WECC Transfer Path Table but which is associated with an identified path. Under these circumstances, it is unclear whether Requirement R1 would require maintenance on these facilities that are not identified in the WECC Transfer Path Table. If so, the requirement might need to apply to transmission owners that do not own any paths identified in the WECC Transfer Path Table. Accordingly, the Commission seeks comment as to whether, under Requirement R1, a transmission owner that owns a major path would be responsible for maintaining and inspecting transmission facilities owned by another entity if such facilities are "necessary for [System Operating Limits] associated with" the major path.

Summary

24. In summary, the Commission proposes to approve FAC–501–WECC–1. The Commission also proposes to approve NERC's petition to retire currently-effective WECC PRC–STD–005–1. In addition, the Commission requests comment on two issues discussed above regarding the (1) Major WECC Transfer Path table, and (2) use of the term System Operating Limits.

[18] *See* Major WECC Transfer Paths table *available at http://www.wecc.biz/Standards/Approved%20Standards/Supporting%20Tables/Table%20Major%20Paths%204-28-08.pdf.* It appears that the list of major transfer paths is relatively stable as the list has not changed for at least the past three years.

[19] A System Operating Limit is defined in the NERC Glossary as "the value (such as MW, MVar, Amperes, Frequency or Volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria." *See* NERC Glossary, *available at http://www.nerc.com/docs/standards/rs/Glossary_of_Terms_2010April20.pdf.*

[20] *See W. Elec. Coordinating Council Reg'l Reliability Standard Regarding Automatic Time Error Corr.,* Order No. 723, 74 FR 25442 (May 28, 2009), 127 FERC ¶ 61,176, at P 38–40 (2009).

[21] WECC Reliability Standard PRC–STD–005–1, Requirement R1.

[22] Proposed WECC Reliability Standard, FAC–501–WECC–1, Requirement R1, *emphasis added.*

B. PRC–004–WECC–1—Protection System and Remedial Action Scheme Misoperation

Background—Currently-Effective PRC–STD–001–1 and PRC–STD–003–1

25. Currently-effective WECC PRC–STD–001–1 applies to transmission operators or transmission owners of 40 specified transmission paths. The regional Reliability Standard requires these entities to certify to WECC that all (1) protective relay applications and (2) protective relay settings and logic are appropriate for the specified transmission paths. It also requires that these entities, once every three years, certify that information is updated and accurate.

26. WECC PRC–STD–001–1 corresponds with NERC PRC–001–1, which addresses protection systems, requires transmission operators and generator operators to notify appropriate entities of relay or equipment failures and to coordinate when installing new or modified protection systems.

27. Currently-effective WECC PRC–STD–003–1 applies to transmission operators and owners of the same 40 specified transmission paths as Reliability Standard PRC–STD–001–1. WECC PRC–STD–003–1 requires applicable transmission operators and owners to ensure all transmission and generation protection system misoperations affecting the reliability of the bulk electric system are analyzed and mitigated.

28. WECC PRC–STD–003–1 corresponds to NERC PRC–003–1, which also relates to protection system misoperations.

WECC and NERC Proposal

29. NERC states that proposed PRC–004–WECC–1 is intended to replace two currently-effective WECC Reliability Standards, PRC–STD–001–1 and PRC–STD–003–1. NERC recommends approval of PRC–004–WECC–1, explaining that it is more stringent than the corresponding NERC PRC–004–1. Specifically, NERC explains that PRC–004–WECC–1 requires that all transmission and generation protection system and remedial action scheme misoperations on major WECC transfer paths be analyzed and mitigated within a specific timeframe. In contrast, NERC PRC–003–1 requires Regional Entities to establish procedures for review, analysis, reporting, and mitigation of transmission and generation Protection System Misoperations, but it does not specifically address the owners of the transmission and generation facilities. NERC also explains that NERC PRC–004–1 has requirements for protection system misoperations, but does not provide for the additional requirements included in PRC–004–WECC–1.[23]

30. Proposed PRC–004–WECC–1 contains three main provisions. Requirement R1 provides that "System Operators and System Protection Personnel" of transmission owners and generator owners must analyze all protection system and remedial action scheme operations. Requirements R1.1 and R1.2 identify time limits for the review and analysis of transmission element tripping, remedial action scheme operations and protection systems. Requirement R2 and the associated sub-requirements identify actions expected to be performed by transmission owners and generator owners for each protection system or remedial action scheme misoperation, including identifying timelines for removing the equipment that failed from service. Requirement R3 states that transmission owners and generator owners are to submit incident reports for any misoperation or repair of equipment that misoperated.

31. Like the approved regional Reliability Standard, the proposed regional Reliability Standard is applicable to transmission owners and transmission operators, but it also is applicable to the generator owners that own facilities listed in the WECC Transfer Path Table and the WECC Remedial Action Schemes Table, which are available on WECC's Web site.[24] In addition, WECC proposes four new regional definitions for Functionally Equivalent Protection System, Functionally Equivalent Remedial Action Scheme, Security-Based Misoperation and Dependability Based Misoperation.

NOPR Proposal

32. The Commission proposes to approve PRC–004–WECC–1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. The Commission also proposes to approve NERC's petition to withdraw currently-effective WECC PRC–STD–001–1 and WECC PRC–STD–003–1. As NERC explains above, it appears that the proposed PRC–004–WECC–1 is more stringent than the corresponding NERC PRC–004–1. Moreover, the proposed PRC–004–WECC–1 addresses Commission directives to develop modifications to the currently-effective regional Reliability Standards.

33. Specifically, in approving the currently-effective WECC PRC–STD–001–1 and WECC PRC–STD–003–1, the Commission directed WECC to make certain modifications in developing replacement Reliability Standards. To address these directives, in the proposed Standard, WECC no longer references any WECC forms, and the text regarding the compliance monitoring period has been removed from the proposed Standard. In addition, the proposed regional Reliability Standard no longer references the regional definition of Disturbance, which did not match the NERC definition of Disturbance in the NERC Glossary. The proposed regional Reliability Standard also would remove the definition for Business Day. Since these terms are not included in any of the existing or proposed regional Reliability Standards, the Commission proposes to direct the ERO to remove these regional definitions from the NERC Glossary, upon approval of the PRC–004–WECC–1. The proposed regional Reliability Standard also removes the sanctions table and includes violation risk factors, violation severity levels, measures and time horizons. The Commission commends WECC for addressing these directives.

34. Nevertheless, the Commission has concerns regarding several provisions of the proposed regional Reliability Standard, and seeks additional comments, as discussed below.

WECC Transfer Path Table

35. Similar to the discussion above regarding proposed FAC–501–WECC–1, we are concerned regarding the removal of the list of major transmission paths from proposed PRC–004–WECC–1 and the replacement with a link to the WECC Web site. Currently-effective WECC PRC–STD–003–1 is applicable to transmission owners or operators that maintain transmission paths listed in an attachment to the Reliability Standard. The attachment identifies 40 major transmission paths in the Western Interconnection. By contrast, the proposed PRC–004–WECC–1 removes attachment A and, instead, directs transmission owners to the most current WECC Transfer Path Table, which is available on the WECC Web site. Although the table posted on the WECC Web site lists the same 40 major paths as the attachment to the approved regional Reliability Standard, the Commission is concerned that by referencing the WECC Transfer Path Table posted on the WECC Web site, WECC could modify the document without Commission and industry notice and opportunity to respond.

36. The possibility for the applicability of the Reliability Standard

[23] *See* NERC Petition at 11, 19–20.

[24] *See* proposed regional Reliability Standard PRC–004–WECC–1, Section 4 (Applicability).

to change at any time could create confusion for entities that need to comply as well as any compliance enforcement staff trying to determine which entities are responsible for complying with the Reliability Standard. Accordingly, the Commission seeks comment on how NERC and WECC intend to develop and provide notice of proposed changes to the WECC Transfer Path Table. We also seek comment on how NERC and WECC will ensure that changes to the applicability of the Reliability Standard will not undermine its effectiveness. We propose to direct WECC to develop a modification to the Reliability Standard to address our concern. For example, WECC could include its criterion for identifying and modifying major transmission paths listed in the WECC Transfer Path Table and make an informational filing each time it makes a modification to the table. Another option would be for WECC to file its criterion with the Commission and post revised transfer path tables and referenced catalogs on its Web site before they become effective with concurrent notification to NERC and the Commission. Alternatively, the Regional Entity could include the WECC Transfer Path Table as an attachment to the modified Reliability Standard. In this way, the Commission would be able to verify that the Regional Entity is applying the requirements of the regional Reliability Standard in a just and reasonable manner.

Proposed Regional Definitions

37. The proposed regional Reliability Standard includes four new regional definitions meant to apply only in WECC. Two of the proposed definitions (Functionally Equivalent Protection System and Functionally Equivalent Remedial Action Scheme) have added "functionally equivalent" to terms that already exist in the NERC Glossary.[25] The NERC Glossary definition of Protection System lists the types of equipment that can be used as protection systems (i.e. protective relays, associated communication systems, voltage and current sensing devices, station batteries and DC control circuitry). By contrast, the proposed WECC definition of Functionally Equivalent Protection System is not limited to any specific components or operating characteristics but, instead, defines Functionally Equivalent Protection Systems based on what they can do: "[e]ach Protection System can detect the same faults within the zone of protection and provide the clearing times and coordination needed to comply with all Reliability Standards." In addition, the NERC Glossary defines Remedial Action Scheme, or Special Protection System, as "[a]n automatic protection system designed to detect abnormal or predetermined system conditions, and take corrective actions other than and/or in addition to the isolation of faulted components to maintain system reliability."[26] By contrast, WECC proposes to define Functionally Equivalent RAS as "[a] Remedial Action Scheme that provides the same performance as follows: Each [Remedial Action Scheme] can detect the same conditions and provide mitigation to comply with all Reliability Standards. Each [Remedial Action Scheme] may have different components and operating characteristics."

38. The Commission has expressed concern about the unnecessary proliferation of glossary terms and has directed the ERO to be vigilant in assuring that a regional definition is consistent with both NERC Glossary terms and other approved Regional Entity glossary terms.[27] In the instant proceeding, we are concerned that the proposed definitions of Functionally Equivalent Protection System and Functionally Equivalent RAS do not add any further clarity to the NERC Glossary terms. Accordingly, we seek an explanation from WECC and other interested commenters regarding whether these new terms are more inclusive than the corresponding NERC Glossary definitions and, if so, how.

39. WECC proposes to define Functionally Equivalent Protection System as "[a] Protection System that provides performance as follows: Each Protection System can detect the same faults within the zone of protection * * *."[28] It is unclear what the phrase "detect the same faults" means within this definition. For example, this phrase could refer to the ability of one protection system to act as a back-up for another protection system. Alternatively, this phrase could imply that a protection system should be able to detect a fault within in a different sub-area of the same zone of protection. Accordingly, we seek comment on the meaning of the phrase "the same faults" within the definition.

40. In addition, the current NERC Glossary definition of Misoperation includes: (1) Failure of a protection system to operate; (2) protection system operation for a fault outside of the planned zone of protection; and (3) unintentional operation of a protection system. Instead of using this NERC Glossary definition, WECC has developed two new terms: Security-Based Misoperations and Dependability-Based Misoperations. The proposed WECC definitions address: (1) Incorrect operation of a protection system (Security-Based Misoperation); and (2) absence of a protection system to operate (Dependability-Based Misoperation). The bifurcation of the term Misoperation may be confusing because at least some of the requirements for each type of misoperation appear to overlap. We seek an explanation from WECC and other interested commenters regarding why these two new regional terms are necessary or desirable within the context of the proposed regional Reliability Standard, and how they will enhance reliability.

Summary

41. The Commission proposes to approve PRC–004–WECC–1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. The Commission also proposes to approve NERC's petition to withdraw currently-effective WECC PRC–STD–001–1 and WECC PRC–STD–003–1. In addition, the Commission requests comment on three issues discussed above regarding (1) the Major WECC Transfer Path table; (2) whether the proposed regional terms, Functionally Equivalent Protection System and Functionally Equivalent RAS, are more inclusive than the corresponding NERC Glossary definitions; and, (3) the necessity of the proposed regional terms, Security-Based Misoperations and Dependability-Based Misoperations.

C. VAR–002–WECC–1—Automatic Voltage Regulators

Background

42. Applicable to all generator operators and generator owners, NERC VAR–002–1.1b is meant to ensure that generators provide reactive and voltage control necessary to ensure voltage levels, reactive flows, and reactive resources are maintained within applicable facility ratings to protect equipment and the reliable operation of the Interconnection. Unless exempted by the transmission operator, each

[25] *See* NERC Glossary definitions for Protection System and Remedial Action Scheme.

[26] NERC Glossary definition of Special Protection System (Remedial Action Scheme), *available at http://www.nerc.com/docs/standards/rs/Glossary_of_Terms_2010April20.pdf.*

[27] Order No. 723, 74 FR 25,442 at P 37–40.

[28] *See* Proposed Reliability Standard PRC–004–WECC–1, proposed definition of Functionally Equivalent Protection System.

generator operator must maintain the generator voltage or reactive power output (within applicable facility ratings) [29] as directed by the transmission operator. Thus, the NERC Reliability Standard does not require generator operators to operate in automatic voltage control mode when they are operating outside of their facility rating, e.g., generators that are starting-up or generators used to serve peak load that typically run at low megawatt levels.

43. On June 8, 2007, the Commission approved WECC VAR–STD–002a-1, which applies to generator operators of synchronous generating units equipped with automatic voltage regulators in the Western Interconnection. The stated purpose of the regional Reliability Standard is to ensure that automatic voltage control equipment on synchronous generators shall be kept in service at all times, except in specified circumstances, and that outages of such equipment must be coordinated. It requires that generator operators must normally operate automatic voltage control equipment in voltage control mode and set to respond effectively to voltage deviations. Nevertheless, the levels of non-compliance associated with the approved regional Reliability Standard permit generator operators to operate without automatic voltage control equipment for two percent of the operating hours in a calendar year without penalty. The Commission approved the current regional Reliability Standard as more stringent than the NERC Reliability Standard because the WECC regional Reliability Standard requires synchronous generators to have their automatic voltage regulators in service at all times with exceptions limited to specific circumstances. In contrast, the NERC Reliability Standard does not specify a list of exceptions, which could mean that transmission operators may, upon request of the generator operators, permit outages of automatic voltage regulators for a broader range of reasons.[30]

WECC and NERC Proposal

44. NERC requests approval of VAR–002–WECC–1 (Automatic Voltage Regulators) and requests the concurrent retirement of WECC VAR–STD–002a–1. Proposed VAR–002–WECC–1 would be applicable to all generator operators and transmission operators that operate synchronous condensers. It would only apply to synchronous generators and synchronous condensers that are connected to the bulk electric system.

45. Proposed VAR–002–WECC–1 contains two requirements. Requirement R1 provides that each generator operator and transmission operator shall have automatic voltage regulators in service and in automatic voltage control mode for synchronous generators and synchronous condensers during 98 percent of all operating hours unless exempted by the transmission operator. Sub-requirements R1.1 through R1.10 detail the type of exemptions that the transmission operator may grant to the generator operator to excuse the generator from operating the automatic voltage regulator in automatic voltage control mode. Requirement R2 states that each generator operator and transmission operator must have documentation identifying the number of hours excluded for each sub-requirement R1.1 through R1.10.

46. WECC also proposes to replace the sanctions table with violation risk factors, violation severity levels, measures and time horizons. Finally, WECC proposes a new glossary term, Commercial Operation, to be applicable only in the Western Interconnection.

47. During the standards development process, NERC expressed concern that proposed Requirement R1 was less stringent than the current NERC Reliability Standard.[31] WECC responded that, although Requirement R1 appears to decrease the number of operating hours that a generator operator and transmission operator must keep automatic voltage regulators in service and in automatic voltage control mode from 100 percent to 98 percent, the 98 percent requirement is a translation of the limits set in the levels of non-compliance associated with the current regional Reliability Standard.[32] In addition, WECC explained that the two percent allowance provides more time to start up generating facilities when the automatic voltage regulators are not yet in voltage control mode and allows for evaluation when a generator operator responds to an unforeseen event.[33] WECC also pointed out that NERC VAR–002–1a does not place any restrictions on the length of time or range of acceptable reasons for operating in modes other than automatic voltage control mode. By contrast, WECC pointed out that the proposed VAR–002–WECC–1 limits the range of acceptable reasons and time for operating a generator without the automatic voltage regulator in service and controlling voltage.[34]

48. NERC also notes that, during the Reliability Standards development process, it expressed concern regarding sub-requirement R1.1, which includes an exemption for units operating less than five percent of all hours during a calendar quarter. NERC explains that it raised a concern that the proposed sub-requirement "excludes the hours attributed to the synchronous generator or condenser that operates for less than five percent of all hours during any calendar quarter." [35] WECC responded by explaining that there is no change in the basic five percent threshold between the existing regional Reliability Standard and the proposed regional Reliability Standard. WECC further explained that peaking units often operate, for short periods, at low megawatt levels (below where manufacturers recommend placing the automatic voltage regulators in-service). WECC states that the exclusion below the five percent threshold during a calendar quarter permits the continued practice of allowing the operation of peaking units without penalty for having an out-of-service automatic voltage regulator per the manufacturer's recommendations.[36]

49. NERC states that, whereas NERC VAR–002–1a requires only that a generator operator notify its transmission operator when it either removes or operates the automatic voltage regulator in a condition other than automatic voltage control mode and does not limit the amount of time for such operations, the proposed WECC regional Reliability Standard sets only very limited circumstances for when a generator's automatic voltage regulator should be operated in a mode other than

[29] NERC defines "facility rating" as the maximum or minimum voltage, current, frequency, or real or reactive power flow through a facility that does not violate the applicable equipment rating of any equipment comprising the facility.

[30] *North American Electric Reliability Corp.,* 119 FERC ¶ 61,260 at P 116.

[31] NERC Petition at 34.

[32] The levels of non-compliance assigned to the currently-effective regional Reliability Standard specify that there shall be a level 1 non-compliance if automatic voltage regulators are in service less than 98 percent but at least 96 percent or more of all hours during which the synchronous generating unit is on line for each calendar quarter.

[33] Specifically, WECC explains "[t]he two percent allowance provides for time to start up generating facilities when the [automatic voltage regulators] are not yet in voltage control mode. It also allows for evaluation when the Generator Operators respond to unforeseen events." WECC further explains "[p]eaking units often operate, for short periods, at low megawatt levels (below where manufactures recommend placing the [automatic voltage regulators] in-service). The exclusion below the five percent threshold during a calendar quarter permits the continued practice of allowing the operation of peaking units without penalty for having an out-of-service [automatic voltage control regulators] per the manufacturer recommendations." NERC Petition at 34–35.

[34] *Id.*

[35] *Id.* at 34–35.

[36] *Id.* at 35.

the automatic voltage control mode and further limits the cumulative timeframe for doing so. Thus, NERC represents that the proposed regional Reliability Standard is more stringent than the NERC Reliability Standard.[37]

NOPR Proposal

50. The Commission proposes to approve VAR–002–WECC–1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. Further, the Commission proposes the concurrent retirement of currently-effective WECC VAR–STD–002a–1. As represented by NERC, it appears that proposed VAR–002–WECC–1 is more stringent than the corresponding NERC Reliability Standard.

51. Moreover, in approving the currently-effective WECC VAR–STD–002a–1, the Commission directed WECC to make certain modifications in developing a replacement Reliability Standard. To address these directives, WECC has added violation risk factors, violation severity levels, measures and time horizons, and has removed the sanctions table. WECC also has re-written Requirement WR1 so that it does not include more than one main topic, removed language suggested to move to the Additional Compliance Information section, and removed the reference to Form A.5 to address recommendations made by NERC to modify WECC VAR–STD–002a–1.[38] Thus, it appears that proposed VAR–002–WECC–1 maintains stringencies above the corresponding NERC Reliability Standard while providing additional clarity and conformity. Thus, the Commission proposes to approve the regional Reliability Standard.

52. In addition, the Commission seeks comments on several issues posed by the WECC proposal, as discussed below.

Automatic Voltage Regulators

53. Requirement R1 of proposed VAR–002–WECC–1 provides that "Generator Operators and Transmission Operators shall have [automatic voltage regulators] in service and in automatic voltage control mode 98% of all operating hours for synchronous generators or synchronous condensers."[39] Requirement R1 then identifies ten circumstances in which a generator operator or transmission operator is excused from this requirement. By specifying the circumstances in which a generator operator or transmission operator is excused from operating in automatic voltage regulator mode, the proposed requirement appears to be more stringent than the requirement in NERC VAR–002–1.1b.

54. The Commission believes that, where installed, automatic voltage regulators should be in-service at all times except in circumstances when the generator is operating at an output level that is not within the design parameters of the automatic voltage regulator or operations of the automatic voltage regulator would result in instability. Automatic voltage regulators are intended to assist in maintaining the reliability of the Bulk-Power System by controlling system voltages. In addition, System Operating Limits for transmission paths in the bulk electric system in the Western Interconnection assume that automatic voltage regulators are in service to control voltage to support the transfer capability.[40] When automatic voltage regulators are out of service, the time required to appropriately respond to disturbances that cause voltage deviations would increase due to the time required to take manual action. If not corrected in sufficient time, these voltage deviations could lead to instability, uncontrolled separation and cascading outages.

55. Although the proposed regional Reliability Standard would limit the circumstances in which a transmission operator or generator operator is excused from keeping automatic voltage regulators in automatic voltage control mode, it also provides a blanket exemption for two percent of all operating hours. In its petition, NERC explains that this exemption would accommodate generating facilities when they are starting up and when the automatic voltage regulators are not yet in voltage control mode. NERC also explains that this exemption allows for evaluation when the generator operators respond to unforeseen events.[41] These limitations identified by NERC in its petition are not explicit in the requirements of the proposed regional Reliability Standard.

56. We are concerned that the proposed provision is written more broadly than necessary. We believe it is appropriate to exempt automatic voltage regulators from being in-service during times when the generator is operating outside of applicable facility ratings. However, as proposed, Requirement R1 would provide generators with a blanket exemption—equal to two percent of all operating hours—from the requirement to maintain automatic voltage regulators in-service. We seek comment on whether the Commission should direct WECC to develop a modification to the proposed regional Reliability Standard to address our concern. For example, consistent with NERC's explanation, NERC could develop a modification replacing the blanket two percent exemption with a list of specific exemptions that would accommodate generating units that are starting up or responding to unforeseen events and are operating outside of applicable facility ratings.

57. The purpose of NERC VAR–002–1.1b is to ensure appropriate reactive and voltage control are provided to maintain voltage levels, reactive flows, and reactive resources are within applicable facility ratings for Reliable Operation. Requirement R1 of VAR–002–1.1b states that the "Generator Operator shall operate each generator connected to the interconnected transmission system in the automatic voltage control mode (automatic voltage regulator in service and controlling voltage) unless the Generator Operator has notified the Transmission Operator." Requirement R2 continues that "[u]nless exempted by the Transmission Operator, each Generator Operator shall maintain the generator voltage or Reactive Power output (within applicable Facility Ratings) as directed by the Transmission Operator." Based on the same rationale articulated regarding the two percent exemption in the regional Reliability Standard, we have a concern regarding the corresponding NERC Reliability Standard. In particular, we seek comment on whether it would provide additional support for Bulk-Power System reliability to propose to direct the ERO to develop a modification to NERC VAR–002–1.1b. Specifically to clarify that, if a generator has an automatic voltage regulator installed, it must be in-service and controlling voltage at all times, equipment and facility ratings permitting, unless exempted by the transmission operator. We believe that such a modification could be consistent with Commission precedent.[42] The Commission's concerns regarding the NERC Reliability Standard are introduced here as they correspond with certain elements of the WECC standards that are the subject of the immediate proceeding. However, any proposal to direct the development of modifications to the NERC Reliability

[37] *Id.* at 29.

[38] *See id.* at 31.

[39] Proposed regional Reliability Standard VAR–002–WECC–1, Requirement R1.

[40] *See* NERC Petition at 29.

[41] NERC Petition at 34–35.

[42] *Order on Reliability Standard Interpretation,* 132 FERC ¶ 61,220, at P 27 (2010) (VAR Interpretation Order).

Standards would be addressed in a separate proceeding.

Exclusion of Synchronous Generators that Operate for Less Than Five Percent of All Hours During a Calendar Quarter

58. Requirement R1.1 of proposed VAR–002–WECC–1 would allow exclusion of any synchronous generator or synchronous condenser that "operates for less than five percent of all hours during any calendar quarter" from operating with automatic voltage regulator in service and in automatic voltage control mode. During the Reliability Standard development process of the proposed regional Reliability Standard, NERC expressed concern regarding the exclusion of these hours.[43] WECC responded by explaining that the "exclusion below the five percent threshold during a calendar quarter permits the continued practice of allowing the operation of peaking units without penalty for having an out-of-service [automatic voltage regulator] per the manufacturer recommendations" since "[p]eaking units often operate, for short periods, at low megawatt levels (below where manufacture[r]s recommend placing the [automatic voltage regulators] in-service)."[44] Thus, it appears that WECC developed the five percent threshold provision to account for out-of-service automatic voltage regulators per the manufacturer recommendations regarding automatic voltage regulator design limitations.

59. We are concerned, however, that the provision is written more broadly than necessary. It appears inefficient to allow an exemption for any synchronous generator or synchronous condenser that "operates for less than five percent of all hours during any calendar quarter" in order to address concerns about operation limits based on manufacture recommendations, and could potentially exempt other generator operators and transmission operators. The Commission seeks comment on whether it is necessary or desirable to direct WECC to develop a modification through its Reliability Standards development process that addresses this concern. For example, one reasonable solution would be to develop a replacement requirement that directly addresses the need for an exemption for peaking units operating automatic voltage regulators when necessary to satisfy manufacturer recommendations regarding the operation of an automatic voltage regulator.

[43] NERC Petition at 34–35.

[44] *Id.* at 35.

Automatic Voltage Regulator Replacement

60. Proposed sub-requirement R1.6 lengthens the automatic voltage regulator replacement timeline due to component failure from 15 months to 24 months "to accommodate design and procurement especially for nuclear units."[45] The ERO supported the extension of the outage time frame for the automatic voltage regulators. The Commission, giving due weight to WECC and the ERO, proposes to accept the Reliability Standard with the modification to this provision.

61. We are concerned that allowing an additional nine months of non-operation of automatic voltage regulator is not necessary for many, if not most, units. The additional replacement time could lead to a decrease in generation that can react in automatic voltage regulator mode. In the event of a contingency, this could have an impact on bulk electric system reliability. We believe that it may be appropriate to direct WECC to develop a modification to this provision to address our concern. For example, WECC could allow fifteen months for replacement with an opportunity to seek an extension up to nine months where justified. Alternatively, WECC could retain a fifteen month replacement period for non-nuclear generator units, and a twenty-four month replacement period for nuclear generator units. The Commission seeks comment from WECC, NERC and other interested commenters regarding the historical replacement period for nuclear and non-nuclear units, and the appropriateness of the Commission proposal. For example, comments could include documentation and timeline summary of previous "design and procurement" for automatic voltage regulator component failures demonstrating that automatic voltage regulator outages frequently last more than 15 months in order to support extending the replacement period.

Responding to Voltage Deviations

62. The current regional Reliability Standard provides that "[a]ll synchronous generators with automatic voltage control equipment shall normally be operated in voltage control mode and set to respond effectively to voltage deviations." The proposed regional Reliability Standard removes this requirement but the NERC Petition does not provide any explanation why, or potential impact of, removing the provision.

63. We seek further explanation from WECC, NERC, and public comment, on the impact of removing this provision from the currently-effective WECC regional Reliability Standard. We are concerned that, by removing the requirement for automatic voltage regulators to respond effectively to voltage deviations, the proposed regional Reliability Standard would not require entities to assess the performance of the automatic voltage regulators to ensure they are appropriately responding to voltage deviations to support reliability of the Bulk-Power System.

Summary

64. The Commission proposes to approve VAR–002–WECC–1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. Further, the Commission proposes the concurrent retirement of currently-effective WECC VAR–STD–002a–1. In addition, the Commission requests comment on issues discussed above regarding whether the Commission should direct WECC to develop modifications to the proposed regional Reliability Standard that would: (1) Replace the blanket two percent exemption with a list of specific exemptions; and (2) more narrowly tailor the exemption for any synchronous generator or synchronous conductor that operates less than five percent of all operating hours during any calendar quarter. The Commission also seeks comment on the historical replacement period for nuclear and non-nuclear units and whether the Commission should direct WECC to modify the regional Reliability Standard to limit the acceptable duration of automatic voltage regulator outages. Finally, the Commission seeks comment on the impact of removing the requirement that all generators with automatic voltage control equipment be operated in automatic voltage control mode and set to respond to voltage deviations.

D. VAR–501–WECC–1—Power System Stabilizer

Background

65. Currently-effective WECC VAR–STD–002b–1 applies to generator operators with generators equipped with power system stabilizers. The current regional Reliability Standard requires that generator operators keep power system stabilizers in service at all times, except in specified circumstances. Further, currently-effective WECC VAR–

[45] NERC Petition at Exhibit C, "Consideration of Comments for VAR–002–WECC–1—Automatic Voltage Regulator Comments were due January 2, 2008."

STD–002b–1 requires that power system stabilizers are properly tuned in accordance with WECC Criterion, referenced in the standard. This regional Reliability Standard does not have a corresponding NERC Reliability Standard. The Commission approved the current regional Reliability Standard because it addresses matters that are not addressed by a NERC Reliability Standard.[46]

WECC and NERC Proposal

66. NERC requests approval of VAR–501–WECC–1 and asks for the concurrent retirement of the current WECC VAR–STD–002b–1. Proposed VAR–501–WECC–1 would apply to generator operators. Its purpose is to ensure that power system stabilizer on synchronous generators are kept in service.

67. Proposed VAR–501–WECC–1 contains two requirements. Requirement R1 provides that each generator operator with a synchronous generator equipped with a power system stabilizer must have the power system stabilizer in service during 98 percent of all operating hours. NERC explains that a power system stabilizer is part of the excitation control system of a generator used to increase power transfer levels by improving power system dynamic performance. Sub-requirements R1.1 through R1.12 set forth exceptions to the operating requirement in Requirement R1. Requirement R2 states that each generator operator must have documentation identifying the number of hours excluded for each sub-requirement R1.1 through R1.12.

68. In the Petition, NERC and WECC explain that the purpose of VAR–501–WECC–1 is to ensure that power system stabilizers on synchronous generators are kept in service. NERC and WECC state that the corresponding NERC VAR–002–1.1b requires only that a generator operator notify its transmission operator when it removes the power system stabilizer from service and does not limit the amount of time for operating generators without power system stabilizers in service.[47] NERC and WECC explain that, in contrast, proposed VAR–501–WECC–1 requires power system stabilizers to be in service except for specific conditions and for a cumulative time limit per quarter. Thus, according to NERC and WECC, the proposed regional Reliability Standard is more stringent than the corresponding NERC Reliability Standard.

69. In addition, the Petition explains that the proposed regional Reliability Standard includes modifications to address the Commission's directives in the June 2007 order that accepted WECC's currently-effective standards.[48] In particular, WECC proposes to replace the current sanctions table with violation risk factors, violation severity levels, measures and time horizons. Proposed VAR–501–WECC–1 removes the definition of "disturbance" and makes certain directed formatting revisions. WECC also proposes a new glossary term, Commercial Operation, to be applicable only in the Western Interconnection.[49]

70. In the Petition, NERC notes that, during the Reliability Standards development process, NERC expressed concern that the proposed regional Reliability Standard appears less stringent than the current regional Reliability Standard because it would reduce the number of hours that generator operators must keep power system stabilizers in service from 100 percent to 98 percent of all operating hours.[50] WECC responded to NERC's concerns by explaining that the requirement had not been modified but rather was a translation of the existing levels of non-compliance into the requirements of the proposed regional Reliability Standard.[51] WECC further explained that the levels of non-compliance for the current regional Reliability Standard allow generator operators to operate without power system stabilizers in service for two percent of all operating hours without penalty.[52]

71. NERC also notes that, during the regional Reliability Standards development process, NERC expressed concern that sub-requirement R1.1 of the proposed regional Reliability Standard excludes the hours for power system stabilizer operation attributed to the synchronous generator that operates for less than five percent of all hours during any calendar quarter. WECC responded that there is no change in the basic five percent threshold between the current and the proposed regional Reliability Standards. WECC further explained that peaking units often operate, for short periods, at low megawatt levels where manufacturers do not recommend using a power system stabilizer. WECC stated that the exclusion below the five percent threshold during a calendar quarter permits the continued practice of allowing the operation of peaking units without penalty for having an out-of-service power system stabilizer per the manufacturer recommendations.

NOPR Proposal

72. The Commission proposes to approve VAR–501–WECC–1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. The Commission also proposes to approve NERC's proposed retirement of currently-effective WECC VAR–STD–002b–1.

73. As explained by NERC and WECC, proposed VAR–501–WECC–1 is more stringent than the corresponding NERC VAR–002–1.1b. Unlike the NERC Reliability Standard, proposed VAR–501–WECC–1 requires power system stabilizers to be in service except for specific conditions and for a cumulative time limit per quarter. Further, the proposed regional Reliability Standard reflects modifications to address the Commission's concerns in the June 2007 order.[53] As discussed above, WECC has added violation risk factors, violation severity levels, measures and time horizons and has removed the reliability management system sanctions table. WECC also made formatting changes, removed the definition for "Disturbance," and included a definition of "Commercial Operation." Accordingly, the Commission proposes to approve proposed VAR–501–WECC–1 because it appears to be more stringent than the requirements of the applicable NERC Reliability Standards while providing additional clarity and conformity over the current regional Reliability Standard.

74. In addition to the modifications that address the Commission's earlier directives, WECC's proposal includes further modifications about which the Commission seeks comment.

75. The language of proposed VAR–501–WECC–1 is similar to the proposed VAR–002–WECC–1, addressed above. As a result, the Commission discusses below several similar issues as discussed above regarding VAR–002–WECC–1. In particular, the same items

[46] *See North American Electric Reliability Corp.,* 119 FERC ¶ 61,260 at P 122.

[47] NERC Petition at 36.

[48] *North American Electric Reliability Corp.,* 119 FERC ¶ 61,260 at P 123.

[49] Pursuant to WECC's proposal, "Commercial Operation" is defined as "* * * receiving all approvals necessary for operation after completion of initial start-up testing." Requirement R1.1 of VAR–501–WECC–1 excludes a unit from compliance when "the synchronous generator has not achieved Commercial Operation."

[50] NERC Petition at 40.

[51] *Id.*

[52] The levels of non-compliance assigned to the currently-effective regional Reliability Standard specify that there shall be a level 1 non-compliance if power system stabilizers are in service less than 98 percent but at least 96 percent or more of all hours during which the synchronous generating unit is on line for each calendar quarter.

[53] *See North American Electric Reliability Corp.,* 119 FERC ¶ 61,260 at P 123.

discussed above regarding the requirement that generator operators meet the requirements of the proposed regional Reliability Standard only 98 percent of the time, and the exclusion of hours for generators that operate less than five percent of all hours during a calendar quarter, apply to this proposed regional Reliability Standard as well.

In-Service Requirement

76. As proposed, Requirement R1 of VAR–501–WECC–1 provides that "Generator Operators shall have [power system stabilizers] in service 98 [percent] of all operating hours for synchronous generators equipped with [power system stabilizers]." [54] Requirement R1 also sets forth twelve circumstances in which a generator operator is excused from this requirement. By specifying the circumstances in which a generator operator is excused from keeping its power system stabilizer in service, the proposed requirement appears to be more stringent than the currently-effective requirement in NERC VAR–002–1.1b, which requires only that a generator operator notify its transmission operator when there is a change in status of its power system stabilizer.

77. The Commission believes that, where installed, power system stabilizers should be in-service at all times, equipment and facility ratings permitting, unless exempted by the transmission operator. Power system stabilizers are designed to ensure that the generator provides the proper damping to maintain system stability when generation and transmission outages occur.[55] As NERC explains, in the Western Interconnection System, Operating Limits for transmission paths in the bulk electric system assume that power system stabilizers are in service to enhance system damping. When power system stabilizers are out of service, generators may not be able to dampen oscillations occurring on the system, which could lead to instability, uncontrolled separation and cascading outages.

78. Although the proposed regional Reliability Standard would limit the circumstances in which a generator operator is excused from keeping power system stabilizers in-service, it also provides a blanket exemption for two percent of all operating hours. Similar to our discussion above on VAR–002–WECC–1, we believe that an exemption might be appropriate to accommodate generating facilities when they are starting up or operating outside of their facility ratings. However, proposed regional Reliability Standard provides no limitation as to when generating units may use the two percent exemption.

79. We are concerned that the proposed provision is written more broadly than necessary. We believe it is appropriate to exempt power system stabilizers from being in-service during times when the generator is operating outside of applicable facility ratings. However, as proposed, Requirement R1 would provide a blanket exemption for generators to maintain power system stabilizers in-service for two percent of all operating hours without qualification. We seek comment on whether the Commission should direct WECC to develop a modification to the proposed regional Reliability Standard that would address our concern. For example, WECC could develop a modification to replace the blanket two percent exemption with a more specific exemption that would accommodate generating units that are starting up or are operating outside of applicable facility ratings.

80. Requirement R3 and R3.1 of VAR–002–1.1b require a generator operator to inform the transmission operator as soon as possible, but within 30 minutes, whenever there is a change in status or capability, and the expected duration of this change, of any reactive power resource including power system stabilizers. Based on similar concerns articulated above regarding the regional Reliability Standard, we have concerns about the NERC Reliability Standard and whether it adequately addresses power system stabilizer in-service obligations. In particular, we seek comment on whether it would be appropriate to propose to direct the ERO to develop a modification to NERC VAR–002–1.1b to clarify that, if a generator has a power system stabilizer installed, it must be in-service at all times, equipment and facility ratings permitting, unless exempted by the transmission operator. The Commission's concerns regarding the NERC Reliability Standard are introduced here as they correspond with certain elements of the WECC standards that are the subject of the immediate proceeding. However, any proposal to direct the development of modifications to the NERC Reliability Standards would be addressed in a separate proceeding.

Exclusion of Synchronous Generators That Operate for Less Than Five Percent of All Hours During a Calendar Quarter

81. Requirement R1.1 of proposed VAR–501–WECC–1 would allow exclusion of any synchronous generator that operates for less than five percent of all hours during any calendar quarter from operating with power system stabilizer in service. During the Reliability Standard development process of the proposed regional Reliability Standard, NERC expressed concern regarding the exclusion of these hours.[56] WECC responded by explaining that the "exclusion below the five percent threshold during a calendar quarter permits the continued practice of allowing the operation of peaking units without penalty for having an out-of-service power system stabilizer per the manufacturer recommendations" since "[p]eaking units often operate, for short periods, at low megawatt levels (below where manufacture[r]s recommend placing the [power system stabilizer] in-service)." [57] Thus, it appears that WECC developed the five percent threshold provision to account for out-of-service power system stabilizer per the manufacturer recommendations.

82. We seek comment on whether the proposed provision is written more broadly than necessary. Comments should address why it is appropriate to allow an exemption for any synchronous generator that "operates for less than five percent of all hours during any calendar quarter" to address concerns about limitations based on manufacturer recommendations, and could potentially exempt other generator operators. Based on the comments received, the Commission may propose to direct WECC to develop a modification through its Reliability Standards development process that addresses this concern. It appears that one reasonable solution would be to develop a replacement requirement that directly addresses the need for an exemption for peaking units that may not operate with power system stabilizers to satisfy manufacturer recommendations.

Power System Stabilizer Replacement

83. Proposed sub-requirement R1.10 lengthens the power system stabilizer replacement timeline due to component failure from 15 months to 24 months "to accommodate design and procurement

[54] Proposed regional Reliability Standard VAR–501–WECC–1, Requirement R1.

[55] *Id.* at 35.

[56] *Id.* at 40.

[57] *Id.*

especially for nuclear units." [58] The Commission notes that no other evidence was provided in the record to support the extension of the outage time frame for the power system stabilizers from 15 months to 24 months. The Commission proposes to accept the Reliability Standard with this modification.

84. However, since the rationale provided for the increased replacement period is based on the needs of nuclear power generators, we are concerned whether the additional nine months is necessary for many, if not most, units. The additional replacement time could lead to a decrease in generation units operating with the power system stabilizers. In the event of a contingency, this could have an impact on bulk electric system reliability. Accordingly, the Commission seeks comment from WECC, NERC and other interested commenters regarding the historical replacement period for nuclear and non-nuclear units, and the appropriateness of the Commission proposal. For example, comments could include documentation and timeline summary of previous "design and procurement" for power system stabilizer component failures demonstrating that power system stabilizer outages frequently last more than 15 months in order to support extending the replacement period.

Power System Stabilizer Tuning

85. The current regional Reliability Standard requires all generators with power system stabilizers to be properly tuned in accordance with the WECC requirements.[59] The proposed regional Reliability Standard removes the tuning requirement without explanation or analysis of the potential impact of removing the provision. The Commission believes that, if the power system stabilizer is in service, it must be properly tuned to enhance system damping and maintain system stability. The Commission, therefore, seeks further explanation from WECC and NERC, and public comment on, the impact of removing the tuning requirement.

86. This highlights another concern. Currently, no NERC Reliability Standard addresses power system stabilizer tuning. As explained above, a properly tuned power system stabilizer is necessary to enhance system damping. If a power system stabilizer is installed, periodic review of the power system stabilizer tuning is a significant component of maintaining system stability to ensure that system changes have not impacted the performance of the power system stabilizer in supporting system stability. Accordingly, the Commission seeks comment on whether it should propose to direct the ERO to develop a continent-wide Reliability Standard to address this concern. In particular, we seek comment on directing the ERO to develop a Reliability Standard with the purpose of ensuring that, if a power system stabilizer is installed, the power system stabilizer must be properly tuned for operation. Such a Reliability Standard would not require installation of a power system stabilizer, but would ensure that power system stabilizer that are in service would need to be tuned prior to service and the settings must be reviewed periodically to ensure the power system stabilizer operates properly to support the reliability of the Bulk-Power System. The Commission's concerns regarding the NERC Reliability Standard are introduced here as they correspond with certain elements of the WECC standards that are the subject of the immediate proceeding. However, any proposal to direct the development of modifications to the NERC Reliability Standards would be addressed in a separate proceeding.

Summary

87. The Commission proposes to approve VAR–501–WECC–1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. Further, the Commission proposes the concurrent retirement of currently-effective WECC VAR–STD–002b–1. In addition, the Commission requests comment on issues discussed above regarding whether the Commission should direct WECC to develop modifications to the proposed regional Reliability Standard that would: (1) Replace the blanket two percent exemption with a list of specific exemptions; and (2) more narrowly tailor the exemption for any synchronous generator or synchronous conductor that operates less than five percent of all operating hours during any calendar quarter. The Commission also seeks comment on the historical replacement period for nuclear and non-nuclear units and whether the Commission should direct WECC to modify the regional Reliability Standard to limit the acceptable duration of power system stabilizer outages. Finally, the Commission seeks comment on whether it should propose to direct the ERO to develop a continent-wide Reliability Standard that ensures that, if a power system stabilizer is installed, the power system stabilizer must be properly tuned for operation.

IV. Information Collection Statement

88. The Office of Management and Budget (OMB) regulations require that OMB approve certain reporting and recordkeeping (collections of information) imposed by an agency. The information contained here is also subject to review under section 3507(d) of the Paperwork Reduction Act of 1995. As stated above, the Commission previously approved the current regional Reliability Standards that are proposed for replacement in this rulemaking. In the event that the Commission, after receiving comments, determines to adopt the four proposed Reliability Standards, they would not substantially change the entities' current reporting burdens under the five currently effective, approved Reliability Standards.

89. The four proposed WECC regional Reliability Standards (and the five currently approved regional Reliability Standards they are intended to replace) are designated as: FAC–501–WECC–1 (Transmission Maintenance; to replace approved PRC–STD–005–1); PRC–004–WECC–1 (Protection System and Remedial Action Scheme Misoperation; to replace approved WECC PRC–STD–001–1 and PRC–STD–003–1); VAR–002–WECC–1 (Automatic Voltage Regulators; to replace approved WECC VAR–STD–002a–1); and VAR–501–WECC–1 (Power System Stabilizer; to replace approved WECC VAR–STD–002b–1). The proposed standards do not modify or otherwise affect the burdens related to the collection of information already in place. Thus, the proposed replacement Reliability Standards will neither increase the reporting burden nor impose any additional information collection requirements.

Burden Estimate: The Commission does not foresee any additional impact on the reporting burden for small businesses, because the proposed modifications do not increase the existing burdens. However, we will submit this proposed rule to OMB for review.

Title: Version One Regional Reliability Standard for Facilities Design, Connections, and Maintenance; Protection and Control; and Voltage and Reactive.

Action: Proposed Collection FERC–725E.

OMB Control No.: 1902–0246.

[58] NERC Petition at Exhibit C, "Consideration of Comments for VAR–501–WECC–1—Power System Stabilizer Comments were due January 2, 2008."

[59] *Id.* Requirement WR1 of the currently-effective regional Reliability Standard provides: "Power System Stabilizers on generators shall be kept in service at all times, unless one of the exemptions listed in Section C (Measures) applies, and shall be properly tuned in accordance with WECC requirements."

Respondents: Businesses or other for-profit institutions; not-for-profit institutions.

Frequency of Responses: On occasion.

Necessity of the Information: This proposed rule proposes to approve four requested replacements (to five existing approved regional Reliability Standards). The proposed regional Reliability Standards help ensure the reliable operation of the Western Interconnection.

Internal Review: The Commission proposes to approve FAC–501–WECC–1, PRC–004–WECC–1, VAR–002–WECC–1, and VAR–501–WECC–1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. In addition, under section 215(d)(5) of the FPA and section 39.5(f) of our regulations, the Commission proposes to direct the ERO to develop certain modifications to further clarify the requirements of the proposed WECC regional Reliability Standards.

90. Interested persons may obtain information on the reporting requirements by contacting the following: Federal Energy Regulatory Commission, 888 First Street, NE., Washington, DC 20426 [Attention: Ellen Brown, Office of the Executive Director, e-mail: *DataClearance@ferc.gov,* Phone: (202) 502–8663, fax: (202) 273–0873].

91. For submitting comments concerning the collection(s) of information and the associated burden estimate(s), please send your comments to the Commission and to the Office of Management and Budget, Office of Information and Regulatory Affairs, Washington, DC 20503 [Attention: Desk Officer for the Federal Energy Regulatory Commission, phone (202) 395–4638, fax: (202) 395–7285]. For security reasons, comments to OMB should be submitted by e-mail to: *oira_submission@omb.eop.gov.* Comments submitted to OMB should include Docket Number RM09–14 and OMB Control Number 1902–0246.

V. Environmental Analysis

92. The Commission is required to prepare an Environmental Assessment or an Environmental Impact Statement for any action that may have a significant adverse effect on the human environment.[60] 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.[61] The actions proposed herein fall within this categorical exclusion in the Commission's regulations.

VI. Regulatory Flexibility Act Certification

93. The Regulatory Flexibility Act of 1980 (RFA)[62] 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 proposed rule and that minimize any significant economic impact on a substantial number of small entities. The Small Business Administration's (SBA) Office of Size Standards develops the numerical definition of a small business.[63] The SBA has established a size standard for electric utilities, stating that a firm is small if, including its affiliates, it is primarily engaged in the transmission, generation and/or distribution of electric energy for sale and its total electric output for the preceding twelve months did not exceed four million megawatt hours.[64] The RFA is not implicated by this proposed rule because the modification discussed herein will not have a significant economic impact on a substantial number of small entities. Moreover, the proposed Reliability Standards reflect a continuation of existing requirements for these reliability entities. Accordingly, no regulatory flexibility analysis is required.

VII. Comment Procedures

94. The Commission invites interested persons to submit comments on the matters and issues proposed in this notice to be adopted, including any related matters or alternative proposals that commenters may wish to discuss. Comments are due February 22, 2011. Comments must refer to Docket No. RM09–9–000, and must include the commenter's name, the organization they represent, if applicable, and their address in their comments.

95. The Commission encourages comments to be filed electronically via the eFiling link on the Commission's Web site at *http://www.ferc.gov.* The Commission accepts most standard word processing formats. Documents created electronically using word processing software should be filed in native applications or print-to-PDF format and not in a scanned format. Commenters filing electronically do not need to make a paper filing.

96. Commenters unable to file comments electronically must mail or hand-deliver an original copy of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, NE., Washington, DC 20426. These requirements can be found on the Commission's Web site, see, *e.g.,* the "Quick Reference Guide for Paper Submissions," available at *http://www.ferc.gov/docs-filing/efiling.asp* or via phone from FERC Online Support at (202) 502–6652 or toll-free at 1–866–208–3676.

97. All comments will be placed in the Commission's public files and may be viewed, printed, or downloaded remotely as described in the Document Availability section below. Commenters on this proposal are not required to serve copies of their comments on other commenters.

VIII. Document Availability

98. 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 p.m. Eastern time) at 888 First Street, NE., Room 2A, Washington, DC 20426.

99. 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.

100. User assistance is available for eLibrary and the FERC's Web site during normal business hours from FERC Online Support at (202) 502–6652 (toll free at 1–866–208–3676) or e-mail at *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.*

By direction of the Commission.

Kimberly D. Bose,

Secretary.

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[60] *Regulations Implementing the National Environmental Policy Act of 1969,* Order No. 486, FERC Stats. & Regs. ¶ 30,783 (1987).

[61] 18 CFR 380.4(a)(2)(ii).

[62] 5 U.S.C. 601–612.

[63] 13 CFR 121.101.

[64] 13 CFR 121.201, Sector 22, Utilities & n. 1.