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

**WESTERN ELECTRICITY COORDINATING ) Docket No. RM09-9-000  
COUNCIL SYSTEM OPERATING LIMITS )  
REGIONAL RELIABILITY STANDARD )**

**COMMENTS OF THE  
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION  
IN RESPONSE TO NOTICE OF PROPOSED RULEMAKING**

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## I. INTRODUCTION

The North American Electric Reliability Corporation (“NERC”)<sup>1</sup> hereby provides these comments in response to the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) Notice of Proposed Rulemaking (“NOPR”)<sup>2</sup> regarding Regional Reliability Standards 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 (“WECC NOPR”). In the WECC NOPR, the Commission proposed to approve the Regional Reliability Standards developed by the Western Electricity Coordinating Council (“WECC”) and approved by NERC and proposed to direct WECC to develop certain modifications to the standards.

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 ensures that automatic voltage regulators remain in service on synchronous generators and condensers in the Western Interconnection. Proposed VAR-501-WECC-1 ensures that power system stabilizers remain in service on synchronous generators in the Western Interconnection.

By this filing, NERC submits its response to the WECC NOPR.

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<sup>1</sup> The Federal Energy Regulatory Commission (“FERC” or “Commission”) certified NERC as the electric reliability organization (“ERO”) in its order issued on July 20, 2006 in Docket No. RR06-1-000. *North American Electric Reliability Corporation*, “Order Certifying North American Electric Reliability Corporation as the Electric Reliability Organization and Ordering Compliance Filing,” 116 FERC ¶ 61,062 (July 20, 2006).

<sup>2</sup> *Version One Regional Reliability Standards for Facilities Design, Connections, and Maintenance; Protection and Control; and Voltage and Reactive*, 133 FERC ¶ 61,226 (December 17, 2010) (“NOPR”).

## II. NOTICES AND COMMUNICATIONS

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

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## III. DISCUSSION

### A. The Proposed Regional Reliability Standards Comply with Prior Commission Directives.

In its February 9, 2009 filing,<sup>3</sup> NERC requested Commission approval of four proposed regional Reliability Standards:

- FAC-501-WECC-1–Transmission Maintenance (FAC-501-WECC-1);
- PRC-004-WECC-1– Protection System and Remedial Action Scheme Misoperation (PRC-004-WECC-1);
- VAR-002-WECC-1– Automatic Voltage Regulators (VAR-002-WECC-1); and
- VAR-501-WECC-1– Power System Stabilizer (VAR-501-WECC-1).

The proposed standards conform to the Commission's June 2007 Order directing WECC to make certain modifications in response to NERC comments and Commission determinations.

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<sup>3</sup> See Petition of the North American Electric Reliability Corporation for Approval of four Proposed Western Electricity Coordinating Council Regional Reliability Standards as Directed in the Order Approving Regional Reliability Standards for The Western Interconnection and Directing Modifications, Docket No. RM09-09-000 (February 9, 2009).

Specifically in the June 2007 Order, the Commission: (1) determined that (a) 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 (b) documents that are referenced in the Reliability Standard should be attached to the Reliability Standard; (2) 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; and (3) directed WECC to address stakeholder concerns regarding ambiguities in the terms “load responsibility” and “firm transaction.”

The four proposed standards are meant to replace certain currently approved regional Reliability Standards:

- FAC-501-WECC-1 is intended to replace PRC-STD-005-1– Transmission Maintenance (WECC);
- PRC-004-WECC-1 is intended to replace PRC-STD-001-1– Certification of Protective Relay Applications and Settings (WECC) and PRC-STD-003-1– Protective Relay and Remedial Action Scheme Misoperation (WECC);
- VAR-002-WECC-1 is intended to replace VAR-STD-002a-1– Automatic Voltage Regulators (WECC); and
- VAR-501-WECC-1 is intended to replace VAR-STD-002b-1– Power System Stabilizer (WECC).

**B. NERC Supports the Approval of WECC’s Proposed Regional Reliability Standards**

NERC agrees with and supports the Commission’s proposal to approve the four Regional Reliability Standards: FAC-501-WECC-1, PRC-004-WECC-1, VAR-002-WECC-1, and VAR-501-

WECC-1. NERC believes that these standards are just, reasonable, not unduly preferential, and in the public interest.

**C. Responses to the Commission’s Requests for Additional Information and Comment**

NERC offers the following comments in response to specific issues raised in the WECC NOPR.

**a. Development of a Reliability Standard Requiring that Automatic Voltage Regulators be In-Service and Controlling Voltage at All Times**

In the WECC NOPR, the Commission proposed to require generators to keep Automatic Voltage Regulators (“AVRs”) in-service and controlling voltage at all times, equipment and facility ratings permitted, unless exempted by the transmission operator. Specifically, in Paragraphs 57 and 80 of the WECC NOPR, the Commission stated:

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. 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.

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.

Regarding the question of whether generators should be required to keep AVR's in-service and controlling voltage at all times, equipment and facility ratings permitted, unless exempted by the transmission operator, NERC has not performed the technical analysis necessary to determine whether such a requirement is necessary for bulk power system reliability. However, NERC notes that the Commission's statement that any proposal to develop such modifications would be addressed in a separate proceeding would provide NERC the necessary time to analyze technically whether such a directive is necessary. Additionally, addressing the issue of whether AVR's should be in-service and controlling voltage at all times should be addressed in a separate proceeding so that NERC can appropriately prioritize such a directive given the ongoing discussion of prioritization of NERC Reliability Standards development projects.

Over the past year, the NERC Standards Committee has been developing a methodology for prioritizing the order in which standards development projects are worked on, focusing its prioritization on those that present a greater risk to bulk power system reliability. The need to establish priorities for NERC's standards development projects was a recurrent topic of

discussion during the technical conference sponsored by the Commission on July 6, 2010. In addition, it was the primary focus of the Commission-led technical conference held on February 8, 2011. At the February 17, 2011 NERC Board of Trustee (“NERC Board”) meeting in Phoenix, the NERC Board endorsed the use of the Standards Development Project Prioritization Tool to provide for a consistent relative ranking of standards development projects based upon several key factors. The tool is a spreadsheet containing information and parameters used to estimate the impact to overall bulk power system reliability as a result of completing and implementing the scope of standards development projects. The tool provides a dynamic means for estimating the overall impact to reliability of completing and implementing a standards development project relative to all the currently planned standards development projects. Given these efforts, NERC respectfully requests that the Commission defer action on issuing a directive on whether AVRs should be in-service and controlling voltage at all times until a separate proceeding is initiated to specifically address the VAR standards. Such a proceeding would also present the appropriate time to consider whether a directive such as the one proposed by the Commission in Paragraph 57 and 80 of the WECC NOPR is necessary.

Additionally, given NERC’s and the Standards Committee’s efforts to re-prioritize standard development project efforts based on their relative significance to bulk power system reliability, issuing a directive at this time related to VAR-002-1.1b has the potential to conflict with current efforts to prioritize projects based on potential impact to reliability.

However, should the Commission proceed in issuing its proposed directive, NERC requests that the directive not be required to be completed by a certain date. This would enable NERC to adhere to the standards development process dictated by the FERC approved Standard

Processes Manual and also enable the project to develop the modification to be initiated in accordance with the standards development project priority methodology explained above.

**b. Development of a Reliability Standard Addressing Power System Stabilization**

Paragraph 86 of the WECC NOPR states:

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.

With respect to whether a continent-wide Reliability Standard to address power system stabilizer tuning is necessary, NERC has not performed the technical analysis necessary to determine whether such a requirement is necessary for bulk power system reliability. However, NERC reiterates the same concerns for issuing such a directive as expressed above. If the Commission receives comments that compel it to direct NERC to develop such a Reliability Standard, NERC requests that enough flexibility be afforded so that NERC can appropriately prioritize the directive given NERC's ongoing standard development prioritization efforts described above.

#### IV. CONCLUSION

For the reasons stated above, NERC respectfully requests that the Commission take action consistent with these comments when it issues its Final Rule regarding Regional Reliability Standards FAC-501-WECC-1, PRC-004-WECC-1, VAR-002-WECC-1, and VAR-501-WECC-1.

Respectfully submitted,

*/s/ Holly A Hawkins*

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**CERTIFICATE OF SERVICE**

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 22nd day of February, 2011.

*/s/ Holly A. Hawkins*  
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