



March 3, 2011

VIA ELECTRONIC FILING

Neil Thomson
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Re: *North American Electric Reliability Corporation*

Dear Mr. Thomson:

The North American Electric Reliability Corporation (“NERC”) hereby submits this Notice of Filing of proposed modifications contained in six Reliability Standards (BAL-002-1 Disturbance Control Performance; EOP-002-3 Capacity and Energy Emergencies; FAC-002-1 Coordination of Plans for New Generation, Transmission, and End-User Facilities; MOD-021-2 Documentation of the Accounting Methodology for the Effects of Demand-Side Management in Demand and Energy Forecasts; PRC-004-2 Analysis and Mitigation of Transmission and Generation Protection System Misoperations; and VAR-001-2 Voltage and Reactive Control), included below and set forth in **Exhibit A** to this Notice. NERC provides these modifications as resolutions to nine outstanding directives from Federal Energy Regulatory Commission (“FERC”) Order No. 693.

Additionally, NERC explains how two additional directives from Order No. 693 have been resolved.

The proposed Reliability Standard modifications were approved by the NERC Board of Trustees during its August 5, 2010 meeting.

This Notice consists of the following:

- this transmittal letter;
- a table of contents for the entire Notice;
- a narrative description justifying the proposed Reliability Standard modifications;
- Modifications to the Reliability Standards, BAL-002-1 (Disturbance Control Performance), EOP-002-3 (Capacity and Energy Emergencies), FAC-002-1 (Coordination of Plans For New Generation, Transmission, and End-User Facilities), MOD-021-2 (Documentation of the Accounting Methodology for the Effects of Demand-Side Management in Demand and Energy Forecasts), PRC-004-2 (Analysis and Mitigation of Transmission and Generation Protection System Misoperations), and VAR-001-2 (Voltage and Reactive Control)(**Exhibit A**);
- the complete development record of the proposed Reliability Standard modifications (**Exhibit B**); and
- the Response Team roster (**Exhibit C**).

Please contact the undersigned if you have any questions.

Respectfully submitted,

/Holly A. Hawkins
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*Assistant General Counsel for
Standards and Critical
Infrastructure Protection for North
American Electric Reliability
Corporation*

**BEFORE THE
CROWN INVESTMENT CORPORATION
OF THE PROVINCE OF SASKATCHEWAN**

**NORTH AMERICAN ELECTRIC)
RELIABILITY CORPORATION)**

**NOTICE OF FILING OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
OF PROPOSED MODIFICATIONS
TO RELIABILITY STANDARDS BAL-002-1; EOP-002-3; FAC-002-1;
MOD-021-2; PRC-004-2; AND VAR-001-2**

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Exhibit A: Modifications to the Reliability Standards, BAL-002-1 (Disturbance Control Performance), EOP-002-3 (Capacity and Energy Emergencies), FAC-002-1 (Coordination of Plans For New Generation, Transmission, and End-User Facilities), MOD-021-2 (Documentation of the Accounting Methodology for the Effects of Demand-Side Management in Demand and Energy Forecasts), PRC-004-2 (Analysis and Mitigation of Transmission and Generation Protection System Misoperations), and VAR-001-2 (Voltage and Reactive Control)

Exhibit B: Complete development record of the proposed Reliability Standard modifications

Exhibit C: Response Team roster

I. INTRODUCTION

The North American Electric Reliability Corporation (“NERC”) hereby submits this Notice of Filing of modifications contained in six Reliability Standards:

- BAL-002-1 (Disturbance Control Performance);
- EOP-002-3 (Capacity and Energy Emergencies);
- FAC-002-1 (Coordination of Plans For New Generation, Transmission, and End-User Facilities);
- MOD-021-2 (Documentation of the Accounting Methodology for the Effects of Demand-Side Management in Demand and Energy Forecasts);
- PRC-004-2 (Analysis and Mitigation of Transmission and Generation Protection System Misoperations); and
- VAR-001-2 (Voltage and Reactive Control).

On August 5, 2010, the NERC Board of Trustees approved the proposed modifications to BAL-002-1 (Disturbance Control Performance), EOP-002-3 (Capacity and Energy Emergencies), FAC-002-1 (Coordination of Plans For New Generation, Transmission, and End-User Facilities), MOD-021-2 (Documentation of the Accounting Methodology for the Effects of Demand-Side Management in Demand and Energy Forecasts), PRC-004-2 (Analysis and Mitigation of Transmission and Generation Protection System Misoperations), and VAR-001-2 (Voltage and Reactive Control). In addition, this filing explains how two directives contained in Federal Energy Regulatory Commission (“FERC”) Order No. 693 (pertaining to Reliability Standards IRO-006-4 and the second directive related to VAR-001-2) have been resolved without modifications to the Reliability Standards.

NERC filed these proposed modifications with FERC on September 9, 2010, and is also filing the proposed modifications to the Reliability Standards contained herein with the other applicable governmental authorities in Canada. **Exhibit A** to this filing sets forth the proposed modifications to the Reliability Standards. **Exhibit B** contains the complete record of development for the proposed modifications to the Reliability Standards. **Exhibit C** includes the Response Team roster.

II. NOTICES AND COMMUNICATIONS

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

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III. JUSTIFICATION OF PROPOSED MODIFICATIONS TO THE RELIABILITY STANDARDS

This section summarizes the development of the proposed modifications to the Reliability Standards. These modifications address certain directives contained in FERC Order No. 693. NERC, in its analysis of the proposed modifications to the Reliability Standards, determined that the modifications were just, reasonable, not unduly discriminatory or preferential, and in the public interest.

The complete development record for the proposed modifications to the Reliability Standards is provided in **Exhibit B** and includes the development and approval process, comments received during the industry-wide comment period NERC conducted on the proposed modifications, responses to those comments, ballot information, and NERC's evaluation of the proposed modifications.

Overview of the Process

Following the issuance of the FERC Orders on March 18, 2010, NERC increased its focus on addressing the remaining outstanding directives from FERC Order No. 693. As part of this effort, NERC developed a Standards Authorization Request and set of proposed standard changes to address directives from FERC Order No. 693 that were identified as candidates expected to be less controversial than others. The proposed changes were reviewed and modified by a team of industry experts identified by NERC, then presented for Standards Committee approval. After modifying the proposal to assure the changes did not conflict with the work of existing drafting teams that were nearing project completion, the Standards Committee Executive Committee approved the request in June of 2010. The set of proposed changes were posted for concurrent comment and initial ballot that began on June 18 and concluded on July 14, 2010. The ballot was conducted on a directive-level basis—in essence, a line item ballot. Proposals that did not garner sufficient support as demonstrated by the results of the initial ballot and the comments received were withdrawn from consideration in the recirculation ballot. The team was permitted to make modifications between the initial and recirculation ballots based on comments received to improve the overall quality of the

standard. The recirculation ballot occurred from July 21 to 31, 2010. The results were as follows:

- Quorum: 79.66%
- Modifications in BAL-002-1 related to P321 of Order No. 693: 82.4% Approval;
- Concurrence that P577 of Order No. 693 was addressed with IRO-006-4 : 96.6% Approval;
- Modifications in EOP-002-3 related to P582 of Order No. 693: 80.0% Approval;
- Modifications in FAC-002-1 related to P693 of Order No. 693: 80.1% Approval;
- Modifications in MOD-021-2 related to P1300 of Order No. 693: 96.2% Approval;
- Modifications in PRC-004-2 related to P1469 of Order No. 693: 78.9% Approval;
- Modifications in VAR-001-2 related to P1858 of Order No. 693: 74.6% Approval;
- Modifications in VAR-001-2 related to P1879 of Order No. 693: 72.9% Approval;
- Concurrence that the directive in P1879 of Order No. 693 regarding SMA/SoCal Edison needed no change: 72.9% Approval.

The NERC Board of Trustees approved the proposed modifications for filing with the applicable governmental authorities on August 5, 2010.

Modifications Contained in BAL-002-1

In paragraph 321 of Order No. 693, FERC issued two explicit directives:

1. “The Commission adopts the NOPR’s proposal to require the ERO to develop a modification to the Reliability Standard that refers to the ERO rather than to the NERC Operating Committee in Requirements R4.2 and R6.2. The ERO has the responsibility to assure the reliability of the Bulk-Power System and

should be the entity that modifies the Disturbance Recovery Period as necessary.”

2. “As identified in the Applicability Issues section, the Commission directs the ERO to modify this Reliability Standard to substitute Regional Entity for regional reliability organization as the compliance monitor.”

The first of these two directives was addressed by simply eliminating the provisions within Requirements R4.2 and R4.6 that allowed for the NERC Operating Committee to modify the Disturbance Recovery Period. However, in reviewing FERC’s directive that the ERO should be the entity that modifies the Disturbance Recovery Period as necessary, the Response Team determined that providing NERC with the ability to unilaterally modify the Disturbance Recovery Period would be inconsistent with FERC’s principles for approval of a Reliability Standard. The Response Team determined that implementing this directive could effectively result in de-facto modifications to the “clear and objective criterion or measure for compliance” without being developed in an “open and fair” manner. By removing the ability of the NERC Operating Committee to modify the Disturbance Recovery Period from the standard, any such changes, if desired, would only be available through the use of the Reliability Standards Development Process to modify the standard. This would ensure that the changes to the Disturbance Recovery Period would be subject to full stakeholder review and ultimately applicable governmental authority approval. While this is an alternative approach to that proposed by FERC, NERC and its stakeholders believe this to be a superior solution to address FERC’s concerns, because it relies on the statutorily prescribed method for making changes in Reliability Standards.

The second directive was addressed by substituting “Regional Reliability Organization” in the BAL-002-1 Reliability Standard with “Regional Entity” as the

Compliance Monitor (currently referred to as the Compliance Enforcement Authority). Similarly, NERC made conforming changes to the Compliance section of the standard.

Modifications Contained in EOP-002-3

In paragraph 582 of Order No. 693, FERC issued two explicit directives:

1. Accordingly, the Commission directs that the ERO, through the Reliability Standards development process, address ISO-NE's concern. (paragraph 579. ISO-NE states that Requirement R2 essentially requires the same actions covered by ISO-NE Operating Procedure No. 4. ISO-NE is concerned that a strict approach to auditing compliance with the Reliability Standard could result in a finding that ISO-NE was in violation of the Reliability Standard if it skipped a particular action under its emergency plan even though that action was not called for under ISO-NE procedures. ISO-NE requests that the Commission direct NERC to clarify that a system operator has discretion not to implement every action specified in its capacity and energy emergency plans when other appropriate actions are possible.)
2. Further, we direct the ERO to consider adding Measures and Levels of Non-Compliance in the Reliability Standard.

The first directive was addressed by modifying Requirement R2 of the EOP-002-3 Reliability Standard. The original language of the requirement specified:

“Each Balancing Authority shall implement its capacity and energy emergency plan when required and as appropriate, to reduce risks to the interconnected system.”

In order to make it clear that this requirement did not mandate a full execution of every step in the plan, the language was restructured and additional language added as follows:

“Each Balancing Authority shall, when required and as appropriate, implement take one or more actions as described in its capacity and energy emergency plan ~~when required and as appropriate~~, to reduce risks to the interconnected system.”

The related measure for the standard was also modified to be consistent with the Requirement.

The second directive was addressed by adding measures for Requirements R4, R5, R6, and R7. Similarly, NERC made additional administrative improvements to the Compliance section of the standard, including substituting “Regional Entity” for “Regional Reliability Organization” as the Compliance Monitor (currently referred to as the Compliance Enforcement Authority).

The proposed changes to the EOP-002-3 Reliability Standard are largely administrative in nature and not directly related to the language of any specific requirement.

Modifications Contained in FAC-002-1

In paragraph 693 of Order No. 693, FERC issued one explicit directive:

1. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to FAC-002-0 through the Reliability Standards development process that amends Requirement R1.4 to require evaluation of system performance under both normal and contingency conditions by referencing TPL-001 through TPL-003.

This directive was addressed by modifying Requirement R1.4 of the FAC-002-1 Reliability Standard. The original language required:

“Evidence that the assessment included steady-state, short-circuit, and dynamics studies as necessary to evaluate system performance in accordance with Reliability Standard TPL-001-0.”

In order to comply with the directive, the language was modified as follows:

“Evidence that the assessment included steady-state, short-circuit, and dynamics studies as necessary to evaluate system performance under both normal and contingency conditions in accordance with Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0.”

These changes meet the FERC directive as specified in Order No. 693. No alternative approach was pursued, and language was adopted that directly implements FERC's suggested modification. Accordingly, no further explanation is necessary.

NERC made additional administrative improvements to the Compliance section of the FAC-002-1 standard, including substituting "Regional Entity" for "Regional Reliability Organization" as the Compliance Monitor (currently referred to as the Compliance Enforcement Authority).

Modifications Contained in MOD-021-2

In paragraph 1300 of Order No. 693, FERC issued one explicit directive:

1. The Commission directs the ERO to modify the title and purpose statement to remove the word "controllable." We note that no commenter disagrees.

This directive was addressed by modifying the title and purpose statement of the MOD-021-1 standard to remove the word "controllable." NERC made additional administrative improvements to the Compliance section of the standard, including substituting "Regional Entity" for "Regional Reliability Organization" as the Compliance Monitor (currently referred to as the Compliance Enforcement Authority).

Modifications Contained in PRC-004-2

In paragraph 1469 of Order No. 693, FERC issued two explicit directives:

1. We direct the ERO to consider ISO-NE's suggestion that LSEs and transmission operators should be included in the applicability section, in the Reliability Standards development process as it modifies PRC-004-1.
2. Further, as the ERO reviews this Reliability Standard in its five-year cycle of review, the Regional Entity, rather the regional reliability organization, should develop the procedures for corrective action plans.

The first directive was not addressed at this time due to additional complexity beyond what was anticipated.

The second directive was addressed by making modifications to Requirements R1, R2, and R3 of the PRC-004-2 standard to indicate that procedures to be followed related to Corrective Action Plans are specified by the Regional Entity, rather than the Regional Reliability Organization. Additionally, because PRC-003 is not currently mandatory and enforceable, reference to this standard was removed. While these changes directly modify the requirements in the PRC-004-2 standard, their impacts are largely administrative in nature. The changes do not impose any new burden on any entity, because neither the Regional Entity nor the Regional Reliability Organization are applicable entities under the standard. It is NERC's expectation that the actual procedures used will not change based on the proposed modifications to this standard. Accordingly, no further explanation is necessary.

NERC made additional administrative improvements to the Compliance section of the standard, including the substitution of "Regional Entity" for "Regional Reliability Organization" as the Compliance Monitor (currently referred to as the Compliance Enforcement Authority).

Modifications Contained in VAR-001-2

In paragraph 1858 of Order No. 693, FERC issued one explicit directive:

1. The Commission directs the ERO to address the reactive power requirements for LSEs on a comparable basis with purchasing-selling entities.

This directive was addressed by adding "Load Serving Entities" to the standard as applicable entities and making them subject to the same requirements as Purchasing Selling Entities (*i.e.*, R5.). These changes meet the FERC directive as specified in Order No. 693. No alternative approach was pursued, and language was adopted that directly

implements FERC's suggested modification. Accordingly, no further explanation is necessary.

In paragraph 1879 of Order No. 693, FERC issued two explicit directives:

1. The Commission noted in the NOPR that in many cases, load response and demand-side investment can reduce the need for reactive power capability in the system. Based on this assertion, the Commission proposed to direct the ERO to include controllable load among the reactive resources to satisfy reactive requirements for incorporation into Reliability Standard VAR-001-1.
2. While we [the Commission] affirm[s] this requirement, we expect the ERO to consider the comments of SoCal Edison with regard to reliability and SMA in its process for developing the technical capability requirements for using controllable load as a reactive resource in the applicable Reliability Standards. (1877. SMA supports adoption of the proposal to include controllable load as a reactive resource. SMA notes that its members' facilities often include significant capacitor banks, and further, reducing load can reduce local reactive requirements.

1878. SoCal Edison suggests caution regarding the Commission's proposal to include controllable load as a reactive resource. It agrees that, when load is reduced, voltage will increase and for that reason controllable load can lessen the need for reactive power. However, SoCal Edison believes that controllable load is typically an energy product and there are other impacts not considered by the Commission's proposal to include controllable load as a reactive resource. For example, activating controllable load for system voltage control lessens system demand, requiring generation to be backed down. It is not clear to SoCal Edison whether any consideration has been given to the potential reliability or commercial impacts of the Commission's proposal.)

The first directive was addressed by modifying Requirement R8 of the VAR-001-2 standard to include "controllable load" in the list of examples for reactive resources, and to modify Requirements R2, R5, and R9 to provide similar examples, including "controllable load." These changes meet the FERC directive as specified in Order No. 693. No alternative approach was pursued, and language was adopted that directly implements FERC's suggested modification.

The second directive was to consider the comments of SMA and SoCal Edison. The comments of SMA, while supportive, did not contain any information that required

specific inclusion in the standard. However, to the extent SMA has specific suggestions for improvements to the standard, NERC encourages their participation in the Standards Development Process.

The comments of SoCal Edison reflect a concern regarding the reliability and commercial impacts of FERC's proposal. NERC does not believe there to be any related negative impacts. The current approved standard already allows for the use of load shedding as a reactive resource as specified in Requirement R8, and should entities participate in voluntary load reductions, rather than involuntary load shedding, NERC does not believe the difference in motive is sufficient to warrant additional cautions beyond that which would accompany any controllable load program.

Consideration of the SMA and the SoCal Edison comments did not result in the conclusion that additional changes were required in the standard. Accordingly, the second directive contained in P1879 of Order No. 693 has been addressed with no specific standards action being taken.

NERC made additional administrative improvements to the Compliance section of the standard, including the substitution of "Regional Entity" for "Regional Reliability Organization" as the Compliance Monitor (currently referred to as the Compliance Enforcement Authority).

Directive Addressed Without Additional Standards Modification

In paragraph 577 of Order No. 693, FERC issued one explicit directive:

1. A number of commenters agree that the TLR procedure is an inappropriate and ineffective tool for mitigating actual IROL violations or for use in emergency situations. On the other hand, International Transmission believes the TLR procedure can be an appropriate and effective tool to mitigate IROL violations or for use in emergency situations and MISO argues that operators should not be precluded from implementing the TLR procedure during

emergencies. The Commission disagrees. As explained in the NOPR and in the Blackout Report, actions undertaken under the TLR procedure are not fast and predictable enough for use in situations in which an operating security limit is close to being, or actually is being, violated. As such the Commission cannot agree with International Transmission and MISO. However, the Commission agrees with APPA, EEI, Entergy and MidAmerican that the TLR procedure may be appropriate and effective for use in managing potential IROL violations. Accordingly, the Commission will maintain its direction that the ERO modify the Reliability Standard to ensure that the TLR procedure is not used to mitigate actual IROL violations.

This directive has been addressed within Reliability Standard IRO-006-4, which was submitted on April 7, 2009. Accordingly, this directive has been resolved through alternative means equivalent to or more stringent than the solution proposed by FERC, and modifications to EOP-002 as directed would be duplicative. Making modifications consistent with FERC's directive in P577 of Order No. 693 would introduce a lack of clarity between the two standards (in the form of potential for double jeopardy), and impede an entity's ability to understand the consequences and range of penalties (monetary and/or non-monetary) for a violation of the standards.

Directives Not Addressed Through This Process

NERC's Order No. 693 project originally identified 37 directives related to 13 standards that appeared to be relatively straightforward to implement. However, as these candidates were considered and reviewed with stakeholders, it quickly became clear that the issues were not as simple as might have been expected. Potential conflicts with established programs in various jurisdictions, as well as the potential costs required to ensure compliance, rapidly created a knot of problems that will require extensive discussions to untangle. Certain of the issues turned out to be more technically complex than they first appeared. The shortened process used also contributed, in some part, to not gaining prompt consensus. Additionally, many entities provided comments regarding

their ongoing DSM efforts that show a significant amount of diversity and complexity that will need to be considered as Reliability Standards related to DSM are developed.

It is clear from the comments that the issues are complex and will require significant resources. Thus, it will be important to prioritize the work on the additional directives in the context of all the standards development work NERC has underway.

IV. SUMMARY OF THE RELIABILITY STANDARD DEVELOPMENT PROCEEDINGS

NERC initiated the project to address some of the remaining Order No. 693 directives with a Standards Authorization Request on June 2, 2010. Prior to that date, NERC worked with various industry experts to identify directives from Order No. 693 that seemed straightforward to address and then develop draft modifications to the Reliability Standards to address those directives. Changes to 47 different standards were considered during this process. Review of ongoing efforts and discussions regarding the complexity of the effort ultimately led to 13 standards being chosen for modification. The 13 draft standards were developed, and the Standards Authorization Request, the 13 standards, and their implementation plan was posted for comment from June 18, 2010 to July 13, 2010.

NERC's Standards Committee authorized the use of expedited measures from its new process¹ in order to accelerate development of the project. As part of these efforts, an initial ballot of the standards occurred during the last ten days of the comment period. A Response Team, assembled from industry experts and leaders of other NERC standards drafting teams, reviewed all the comments received and ultimately identified six

¹ See, Notice of Filing of the North American Electric Reliability Corporation of the Reliability Standard Process Manual Incorporating Proposed Revisions to the Reliability Standards Development Process (June 21, 2010).

standards that it believed were appropriate to move forward to recirculation ballot. Changes were made to some of the drafts based on comments received in order to achieve greater consensus. These modified standards were posted for recirculation ballot July 21, 2010 through July 31, 2010. All six of the proposed Reliability Standards achieved sufficient quorum and approval to move forward to NERC's Board of Trustees for consideration as industry-approved standards. On August 5, 2010, NERC's Board of Trustees met and approved these proposed modifications to the Reliability Standards for submission to the applicable governmental authorities in North America.

NERC recognizes that much work remains to be done on the Order No. 693 directives. NERC is committed to continuing the standards development work on these important issues.

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Exhibits A -C

(Available on the NERC Website at

http://www.nerc.com/fileUploads/File/Filings/Attachments_Resp_693_Standard_Filing.pdf)