

July 27, 2018

VIA ELECTRONIC FILING

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

RE: *North American Electric Reliability Corporation*

Dear Mr. Erickson:

The North American Electric Reliability Corporation hereby submits Notice of Filing of the North American Electric Reliability Corporation of Proposed Reliability Standard PER-003-2 and Retirement of Reliability Standard PER-004-2. NERC requests, to the extent necessary, a waiver of any applicable filing requirements with respect to this filing.

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

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

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

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

NERC requests the AESO consider Proposed Reliability Standard PER-003-2 in the filing for adoption in Alberta as an “Alberta reliability standard(s),” subject to the required procedures and legislation of Alberta and the retirement of Reliability Standard PER-004-2.

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

Respectfully submitted,

/s/ Shamai Elstein

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

Enclosure

**BEFORE THE
ALBERTA ELECTRIC SYSTEM OPERATOR**

**NORTH AMERICAN ELECTRIC)
RELIABILITY CORPORATION)**

**NOTICE OF FILING OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
OF PROPOSED RELIABILITY STANDARD
PER-003-2 AND RETIREMENT OF RELIABILITY STANDARD PER-004-2**

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July 27, 2018

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**BEFORE THE
ALBERTA ELECTRIC SYSTEM OPERATOR**

**NORTH AMERICAN ELECTRIC)
RELIABILITY CORPORATION)**

**NOTICE OF FILING OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
OF PROPOSED RELIABILITY STANDARD PER-003-2 AND RETIREMENT OF
RELIABILITY STANDARD PER-004-2**

The North American Electric Reliability Corporation (“NERC”) hereby submits proposed Reliability Standard PER-003-2 (*Operating Personnel Credentials*). The proposed Reliability Standard (**Exhibit A**) is just, reasonable, not unduly discriminatory or preferential, and in the public interest. NERC also provides notice of the associated implementation plan (**Exhibit B**) and the retirement of the currently-effective Reliability Standards PER-003-1 and PER-004-2.

This filing presents the technical basis and purpose of proposed Reliability Standard PER-003-2, a summary of the development history (**Exhibit D**), and a demonstration that the proposed Reliability Standard meets the Reliability Standards criteria (**Exhibit C**). The NERC Board of Trustees (“Board”) adopted the proposed PER-003-2 Reliability Standard on May 10, 2018.

The purpose of proposed Reliability Standard PER-003-2 is to ensure that System Operators performing the reliability-related tasks of the Reliability Coordinator, Balancing Authority and Transmission Operator are certified through the NERC System Operator Certification Program when filling a Real-time operating position responsible for control of the Bulk Electric System (“BES”). The proposed Reliability Standard was developed following a periodic review of currently effective Reliability Standard PER-003-1. The proposed revision reflects the recommendation of the Project 2016 EPR-01 PER Periodic Review Team to ensure that stakeholders (now and in the future) understand (i) the connection between the Standard and

the Program Manual; and (ii) that the certifications referenced under PER-003-1 are those under the NERC System Operator Certification Program.

NERC also proposes to implement the recommendation of the Enhanced Periodic Review of Personnel, Performance, Training, and Qualifications Standards Team in Project 2016-EPR-01 (“PER PRT”) to retire Reliability Standard PER-004-2. This Reliability Standard falls within Paragraph 81 Criterion B7,¹ because its Requirements are redundant with Requirements in other Reliability Standards that are in effect or that will soon take effect.

For reasons discussed more fully in this filing, proposed Reliability Standard PER-003-2 and the retirement of PER-003-1 and PER-004-2 are just, reasonable, not unduly discriminatory or preferential, and in the public interest.

I. BACKGROUND

A. NERC Reliability Standards Development Procedure

The proposed Reliability Standard was developed in an open and fair manner and in accordance with the Reliability Standard development process. NERC develops Reliability Standards in accordance with Section 300 (Reliability Standards Development) of its Rules of Procedure and the NERC Standard Processes Manual.²

NERC’s proposed rules provide for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing Reliability Standards, and thus

¹ See N. Am. Elec. Reliability Corp., 138 FERC ¶ 61,193, at P 81 (“March 2012 Order”), order on reh’g and clarification, 139 FERC ¶ 61,168 (2012); Petition of the North American Electric Reliability Corporation for Approval of Retirement of Requirements in Reliability Standards, Docket No. RM13-8-000, at Exhibit A (“Paragraph 81 Criteria”) (filed Feb. 28, 2013); N. Am. Elec. Reliability Corp., Order No. 788, 145 FERC ¶ 61,147 (2013).

² The ROP is available at <http://www.nerc.com/AboutNERC/Pages/Rules-of-Procedure.aspx>. The NERC *Standard Processes Manual* is available at http://www.nerc.com/comm/SC/Documents/Appendix_3A_StandardsProcessesManual.pdf.

satisfy certain of the criteria for approving Reliability Standards. The development process is open to any person or entity with a legitimate interest in the reliability of the BPS. NERC considers the comments of all stakeholders, and stakeholders must approve, and the NERC Board must adopt, a Reliability Standard before the standard is submitted to the applicable governmental authorities for approval.

II. JUSTIFICATION FOR PROPOSED RELIABILITY STANDARD PER-003-2

As discussed below and in **Exhibit C**, proposed Reliability Standard PER-003-2 satisfies the Reliability Standards criteria and is just, reasonable, not unduly discriminatory or preferential, and in the public interest.

The requirements in proposed Reliability Standard PER-003-2 remain unchanged from currently effective Reliability Standard PER-003-1. The only proposed modification to the PER-003 standard is to add the following footnote to each requirements: “The NERC certificates referenced in this standard pertain to those certificates identified in the NERC System Operator Certification Program Manual.” The intent of the Standard Drafting Team is to reflect the certifications referenced in the NERC System Operator Certification Program Manual. This proposed footnote provides context for the references to NERC “certificates” in Requirements R1, R2, and R3. No other components of the manual are incorporated into the proposed standard. This clarification aligns with the PER-003 Reliability Standards Audit Worksheet auditor guidance, which provides that the “...Audit Team may contact NERC to confirm the certification information is valid.”

III. JUSTIFICATION FOR THE RETIREMENT OF RELIABILITY STANDARD PER-004-2

On April 4, 2006, NERC submitted multiple proposed Reliability Standards, including PER-001-0, PER-002-0, and PER-003-0, and submitted PER-004-1 on December 5, 2006. On

November 2, 2009, NERC submitted Reliability Standard PER-004-2, which includes two requirements. Requirement R1 provides that, [e]ach Reliability Coordinator shall be staffed with adequately trained and NERC-certified Reliability Coordinator operators, 24 hours per day, seven days per week. Requirement R2 provides that, Reliability Coordinator operating personnel shall place particular attention on [System Operating Limits] and [Interconnection Reliability Operating Limits] and inter-tie facility limits. . [and] shall ensure protocols are in place to allow Reliability Coordinator operating personnel to have the best available information at all times. NERC proposes to implement the PER PRT recommendation to retire Reliability Standard PER-004-2. This Reliability Standard falls within Paragraph 81 Criterion B7, because its requirements are redundant with requirements in other Reliability Standards that are in effect or that will soon take effect.

A. The Requirement for Adequately Trained and NERC-Certified Operators is Redundant with other Reliability Standards.

PER-004-2 Requirement R1’s provision to have “NERC-certified Reliability Coordinator Operators” is addressed in the currently-effective Reliability Standard PER-003-1 (*Operating Personnel Credentials*) Requirement R1, which states that each Reliability Coordinator shall staff its Real-time operating positions with System Operators who have obtained and maintained a valid NERC Reliability Operator certificate. These System Operators include Reliability Coordinators.

PER-004-2 Requirement R1’s provision to have “adequately trained Reliability Coordinator Operators” is addressed in Reliability Standard PER-005-2 (*Operations Personnel Training*) Requirement R1, which states that each Reliability Coordinator shall design, develop and deliver training to its System Operators based on a list of BES company-specific Real-time reliability-related tasks. Additionally, PER-005-2 Requirement R3 states that Reliability Coordinators have to verify that their personnel are capable of performing each of those tasks. The

training mandated by PER-005-2 incorporates reliability-related tasks tailored to the company needs of a given Reliability Coordinator.

B. The Requirements for Reliability Coordinators to Staff Operators 24 Hours a Day, Seven Days Per Week and to Have the Best Available Information around System Operating Limits, Interconnection Reliability Operating Limits, and Inter-Tie Facility Limits are Redundant with other Reliability Standards.

PER-004-2 Requirement R1 calls for staffing 24 hours per day, and seven days per week. Requirement R2 requires Reliability Coordinator operating personnel to examine System Operating Limits (“SOLs”), Interconnection Reliability Operating Limits (“IROLs”) and inter-tie facility limit. These staffing and continuous monitoring requirements enable the Reliability Coordinator to maintain a Wide Area view of the BES and to prevent or mitigate emergency operating situations in real-time operations. Pursuant to a suite of requirements under Emergency Preparedness and Operations (“EOP”) and Interconnection Reliability Operations and Coordination (“IRO”) Reliability Standards, Reliability Coordinators must be continuously staffed with NERC certified Reliability operators, consistent with PER-004-2, to monitor facilities and analyze SOL and IROL. Failure to be continuously staffed with adequately trained NERC certified operators would result in a Reliability Coordinator’s inability to meet their obligations under the EOP and IRO Reliability Standards, as discussed below.

Continuous monitoring is required under Reliability Standard EOP-004-3 (*Event Reporting*) to enable Reliability Coordinators to detect a complete loss of monitoring capability affecting a BES control center for 30 continuous minutes or more such that analysis capability is rendered inoperable. Any complete loss of monitoring for such period of time is a reportable event pursuant to EOP-004-3.

Reliability Standard IRO-002-5 (*Reliability Coordination – Monitoring and Analysis*) also requires Reliability Coordinators to continuously monitor and analyze data necessary to perform

their function. Requirement R5 provides that each Reliability Coordinator must monitor Facilities, the status of Remedial Action Schemes, and non-BES facilities identified as necessary by the Reliability Coordinator, within its Reliability Coordinator Area and neighboring Reliability Coordinator Areas. This monitoring enables Reliability Coordinators to identify any SOL and IROL exceedances within its Reliability Coordination Area.

Reliability Standard IRO 008-2 (*Reliability Coordinator Operational Analyses and Real-time Assessments*) similarly identifies the analyses that Reliability Coordinators must perform while monitoring the system to prevent instability, uncontrolled separation or cascading outages. Pursuant to Requirements R1, R2, and R4, the Reliability Coordinator must perform an Operational Planning Analysis to: (a) assess whether the planned operations for the next-day will exceed SOLs and IROLs within its Wide Area, (b) ensure that coordinated plans are developed for the next-day operations to address these exceedances, and (c) execute Real-time Assessments at least once every 30 minutes. Finally, Reliability Standard IRO-009-2 (*Reliability Coordinator Actions to Operate within IROLs*) requires Reliability Coordinators to have processes in place to take action, to direct others and to take action, or to mitigate the magnitude and duration of an IROL exceedance. A Reliability Coordinator would not be able to meet these obligations without being continuously staffed with NERC-certified operators on a 24/7 basis, consistent with PER-004-3.

Other Reliability Standards emphasize the need for a Reliability Coordinator to receive quality information, consistent with Requirement R2 of PER-004-2, to perform its function. Reliability Standard IRO-010-2 (*Reliability Coordinator Data Specification and Collection*) requires the Reliability Coordinator to collect data from specified entities to ensure it has the data necessary to perform Operational Planning Analyses, Real-time monitoring and Real-time

Assessments. To maintain the validity of this data, the Reliability Coordinator must establish a protocol to resolve data conflicts. Reliability Standard IRO-018-1 (*Reliability Coordinator Real-time Reliability Monitoring and Analysis*) also emphasizes the need to implement processes and procedures for evaluating the quality of Real-time data and to provide assurance that any action taken addresses data quality issues for Real-time monitoring and Real-time Assessments at all times. Finally, Reliability Standard IRO-014-3 (*Coordination among Reliability Coordinators*) ensures that each Reliability Coordinator's operations are coordinated so that they will not adversely impact other Reliability Coordinator Areas and preserve the reliability benefits of interconnected operations.

IV. EFFECTIVE DATE

Proposed Reliability Standard

PER-003-2 is to become effective as set forth in the proposed implementation plan, provided in Exhibit B hereto. Where approval by an applicable governmental authority is required, Reliability Standard PER-003-2 shall become effective the first day of the first calendar quarter that is six (6) calendar months after the effective date of the applicable governmental authority's order approving the standards and terms, or as otherwise provided for by the applicable governmental authority. Where approval by an applicable governmental authority is not required, Reliability Standard PER- 003-2 shall become effective on the first day of the first calendar quarter that is six (6) calendar months after the date the standards and terms are adopted by the NERC Board of Trustees, or as otherwise provided for in that jurisdiction.

Respectfully submitted,

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Date: July 27, 2018

EXHIBITS A - B and D - E

Exhibit C

Reliability Standards Criteria

Exhibit C — Reliability Standards Criteria — Proposed Reliability Standard PER-003-2

Reliability Standards Criteria

The discussion below explains how the proposed Reliability Standard has met or exceeded the Reliability Standards criteria:

1. Proposed Reliability Standards must be designed to achieve a specified reliability goal and must contain a technically sound means to achieve that goal.

The purpose of proposed Reliability Standard PER-003-2, which is unchanged from currently-effective Reliability Standard PER-003-1, is to ensure that System Operators performing the reliability-related tasks of the Reliability Coordinator, Balancing Authority and Transmission Operator are certified through the NERC System Operator Certification Program when filling a Real-time operating position responsible for control of the Bulk Electric System (“BES”). Specifically, proposed Reliability Standard PER-003-2 requires System Operators who are filling a Real-time operating position for a Reliability Coordinator, Balancing Authority or Transmission Operator to be NERC Certified through the NERC System Operator Certification Program. The proposed standard also requires that System Operators demonstrate minimum competencies necessary for their particular operating position.

2. Proposed Reliability Standards must be applicable only to users, owners and operators of the bulk power system, and must be clear and unambiguous as to what is required and who is required to comply.

The proposed Reliability Standard is applicable only to users, owners, and operators of the bulk power system and is clear and unambiguous as to what is required and who is to comply. The proposed Reliability Standard applies to Reliability Coordinators, Transmission Operators and Balancing Authorities. The proposed Reliability Standard clearly articulates the actions that such entities must take to comply with the standard, each of which are triggered by articulated actions and situations.

3. A proposed Reliability Standard must include clear and understandable consequences and a range of penalties (monetary and/or non-monetary) for a violation.

The Violation Severity Levels (“VSLs”) for the proposed Reliability Standard, comport with NERC and FERC guidelines related to their assignment. The assignment of the severity level of each VSL is consistent with the corresponding Requirement and will ensure uniformity and consistency in the determination of penalties. The VSLs do not use any ambiguous terminology, thereby supporting uniformity and consistency in the determination of similar penalties for similar violations. For these reasons, the proposed Reliability Standard includes clear and understandable consequences.

4. A proposed Reliability Standard must identify clear and objective criterion or measure for compliance, so that it can be enforced in a consistent and non-preferential manner.

The proposed Reliability Standard includes a Measure that support the proposed standard’s sole Requirement by clearly identifying what is required and how the Requirement will be enforced. This Measure, which remains substantively unchanged from the Measure in currently-effective Reliability Standard PER-003-2, helps provide clarity regarding how the Requirement will be enforced, and helps ensure that the Requirement will be enforced in a clear, consistent, and

non-preferential manner and without prejudice to any party.

5. Proposed Reliability Standards should achieve a reliability goal effectively and efficiently — but do not necessarily have to reflect “best practices” without regard to implementation cost or historical regional infrastructure design.

The proposed Reliability Standard achieves its reliability goals effectively and efficiently. The proposed revisions reflected in proposed Reliability Standard PER-003-2 effectively address the recommendation of the Project 2016 EPR-01 PER Periodic Review Team to ensure that stakeholders (now and in the future) understand (i) the connection between the Standard and the Program Manual and (ii) that the certifications referenced under currently-effective Reliability Standard PER-003-1 are those under the NERC System Operator Certification Program.

6. Proposed Reliability Standards cannot be “lowest common denominator,” *i.e.*, cannot reflect a compromise that does not adequately protect Bulk-Power System reliability. Proposed Reliability Standards can consider costs to implement for smaller entities, but not at consequences of less than excellence in operating system reliability.

The proposed Reliability Standard does not reflect a “lowest common denominator” approach. To the contrary, proposed PER-003-2 represents a significant improvement over the previous version as described herein.

- 7. Proposed Reliability Standards must be designed to apply throughout North America to the maximum extent achievable with a single Reliability Standard while not favoring one geographic area or regional model. It should take into account regional variations in the organization and corporate structures of transmission owners and operators, variations in generation fuel type and ownership patterns, and regional variations in market design if these affect the proposed Reliability Standard.**

The proposed Reliability Standard applies throughout North America and does not favor one geographic area or regional model.

- 8. Proposed Reliability Standards should cause no undue negative effect on competition or restriction of the grid beyond any restriction necessary for reliability.**

The proposed Reliability Standard has no undue negative effect on competition. The proposed Reliability Standard requires the same performance by each of applicable entity. The proposed Reliability Standard does not unreasonably restrict the available generation or transmission capability or limit use of the Bulk-Power System in a preferential manner.

- 9. The implementation time for the proposed Reliability Standard is reasonable.**

The proposed effective date for the PER-003-2 is just and reasonable and appropriately balances the urgency in the need to implement the standard against the reasonableness of the time allowed for those who must comply to develop necessary procedures, software, facilities, staffing or other relevant capability. NERC proposes an effective date for the proposed Reliability Standard as provided in the Implementation Plan. The proposed implementation period are designed to allow sufficient time for the applicable entities to make any changes in their internal process necessary to implement the proposed revisions. The proposed effective date is explained in the proposed Implementation Plan, attached as **Exhibit B**.

- 10. The Reliability Standard was developed in an open and fair manner and in accordance with the Reliability Standard development process.**

The proposed Reliability Standard was developed in accordance with NERC's ANSI-

accredited processes for developing and approving Reliability Standards.¹ **Exhibit E** includes a summary of the proposed standard development proceedings, and details the processes followed to develop the proposed Reliability Standard. These processes included, among other things, comment periods, pre-ballot review periods, and balloting periods. Additionally, all meetings of the standard drafting team were properly noticed and open to the public.

11. NERC must explain any balancing of vital public interests in the development of proposed Reliability Standards.

NERC has identified no competing public interests regarding the proposed Reliability Standard PER-003-2. No comments were received indicating the proposed Reliability Standard is in conflict with other vital public interests.

12. Proposed Reliability Standards must consider any other appropriate factors.

No other factors relevant to whether the proposed Reliability Standard is just, reasonable, not unduly discriminatory or preferential were identified.

¹ See NERC Rules of Procedure, Section 300 (Reliability Standards Development) and Appendix 3A (Standard Processes Manual).