

June 20, 2019

**VIA ELECTRONIC FILING**

Mr. Patrick Wruck, Commission Secretary  
British Columbia Utilities Commission  
Box 250, 900 Howe Street  
Sixth Floor  
Vancouver, B.C.  
V6Z 2N3

Re: *North American Electric Reliability Corporation*

Dear Mr. Wruck:

The North American Electric Reliability Corporation (“NERC”) hereby submits Notice of Filing of the North American Electric Reliability Corporation of Reliability Standards IRO-002-7, TOP-001-5, and VAR-001-6 Developed Under the NERC Standards Efficiency Review. NERC requests, to the extent necessary, a waiver of any applicable filing requirements with respect to this filing.

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

Respectfully submitted,

/s/ Lauren Perotti

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Enclosure

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**BEFORE THE  
BRITISH COLUMBIA UTILITIES COMMISSION  
OF THE PROVINCE OF BRITISH COLUMBIA**

**NORTH AMERICAN ELECTRIC )  
RELIABILITY CORPORATION )**

**NOTICE OF FILING OF THE  
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION OF RELIABILITY  
STANDARDS IRO-002-7, TOP-001-5, AND  
VAR-001-6 DEVELOPED UNDER THE NERC STANDARDS EFFICIENCY REVIEW**

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June 20, 2019

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<b>Exhibit A</b>	The proposed Reliability Standards
	<b>Exhibit A-1:</b> Proposed Reliability Standard IRO-002-7
	Clean
	Redline to Last Approved (IRO-002-5)
	<b>Exhibit A-2:</b> Proposed Reliability Standard TOP-001-5
	Clean
	Redline to Last Approved (TOP-001-4)
	<b>Exhibit A-3:</b> Proposed Reliability Standard VAR-001-6
	Clean
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<b>Exhibit B</b>	Implementation Plan
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<b>Exhibit D</b>	Analysis of Violation Risk Factors and Violation Severity Levels
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<b>Exhibit E</b>	Technical Rationale
<b>Exhibit F</b>	Summary of Development and Complete Record of Development
<b>Exhibit G</b>	Standard Drafting Team Roster, Project 2018-03 Standards Efficiency Review Retirements

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STANDARDS IRO-002-7, TOP-001-5, AND  
VAR-001-6 DEVELOPED UNDER THE NERC STANDARDS EFFICIENCY REVIEW**

The North American Electric Reliability Corporation (“NERC”) hereby submits three proposed Reliability Standards: (1) proposed Reliability Standard IRO-002-7 – Reliability Coordination – Monitoring and Analysis; (2) proposed Reliability Standard TOP-001-5 – Transmission Operations; and (3) proposed Reliability Standard VAR-001-6 – Voltage and Reactive Control. The proposed Reliability Standards reflect the retirement of individual requirements from the currently effective versions of the standards. As discussed herein, these requirements, which relate to planning for next-day operations, are redundant to other Reliability Standard requirements and should be retired.

The proposals discussed in this filing originate from the first phase of work under NERC’s Standards Efficiency Review. This initiative, which began in 2017, reviewed the body of NERC Reliability Standards to identify those Reliability Standards and requirements that were administrative in nature, duplicative to other standards, or provided no benefit to reliability. The retirement proposals described in this filing, and in a concurrently-filed filing addressing the Facilities Design, Connections, and Maintenance (“FAC”), Interchange Scheduling and Coordination (“INT”), Modeling, Data, and Analysis (“MOD”), and Protection and Control

(“PRC”) families of Reliability Standards,<sup>1</sup> would help achieve a more streamlined, effective, and efficient body of Reliability Standards.

The proposed Reliability Standards, as shown in **Exhibit A**, are just, reasonable, not unduly discriminatory or preferential, and in the public interest. NERC provides notice of: (i) the implementation plan (**Exhibit B**); (ii) the associated Violation Risk Factors (“VRFs”) and Violation Severity Levels (**Exhibit D**), which are generally unchanged from the currently effective versions of those standards; and (iii) the retirement of currently effective Reliability Standards TOP-001-4 and VAR-001-5 and proposed Reliability Standard IRO-002-6.

This filing presents the technical basis and purpose of the proposed Reliability Standards, a demonstration that the proposed Reliability Standards continue to meet the Reliability Standards criteria (**Exhibit C**), and a summary of the standard development history (**Exhibit F**). The NERC Board of Trustees adopted the proposed Reliability Standards on May 9, 2019.

This filing is organized as follows: Section I of the filing presents an overview of the Standards Efficiency Review and a summary of the proposals in this filing. Section II of the filing provides the individuals to whom notices and communications related to the filing should be provided. Section III provides information on the development of the proposals through Project 2018-03 Standards Efficiency Review Retirements. Section IV of the filing provides an overview of each of the Reliability Standard proposals and the justification supporting the proposals. Section V of the filing provides a summary of the proposed implementation plan.

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<sup>1</sup> *Notice of Filing of the North American Electric Reliability Corporation of Revised and Retired Reliability Standards under the NERC Standards Efficiency Review*, filed this day..

## **I. THE STANDARDS EFFICIENCY REVIEW AND SUMMARY OF PROPOSALS**

NERC's mission is to assure effective and efficient reduction of risks to the reliability and security of the North American Bulk Power System ("BPS").<sup>2</sup> Mandatory Reliability Standards play an integral role in helping NERC achieve its mission of a highly reliable and secure grid. After a decade of developing and implementing mandatory Reliability Standards in North America, NERC launched the Standards Efficiency Review in 2017. This comprehensive, multi-year review project comprises a key element of NERC's plan to achieve its long-term strategic goal of establishing risk-based controls to minimize BPS reliability risk while also driving operational efficiencies and effectiveness.<sup>3</sup> This project also marks an important milestone in the maturity of NERC's standard development program.

NERC submitted the first set of mandatory Reliability Standards on April 4, 2006. In the intervening years, NERC invested significant resources to develop new and revised mandatory Reliability Standards to address Federal Energy Regulatory Commission ("FERC") directives and emerging risks. NERC also invested significant time and effort to improve the quality, content, and organization of Reliability Standards. Notable achievements include:

- The evolution in standards-writing from a highly detailed, prescriptive approach to one that is "results-based," whereby standards are written to provide entities with built-in flexibility to achieve the stated reliability goal.
- The retirement of 34 Reliability Standard requirements that were redundant, administrative, or otherwise unnecessary and where violations posed a lesser risk to the reliability of the BPS, under the "paragraph 81" project.<sup>4</sup>

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<sup>2</sup> Unless otherwise indicated, capitalized terms used in this filing shall have the meaning set forth in the *Glossary of Terms Used in NERC Reliability Standards* ("NERC Glossary"), [https://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary\\_of\\_Terms.pdf](https://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf).

<sup>3</sup> See *ERO Enterprise Long-Term Strategy* (Nov. 2017), available on NERC's website at <https://www.nerc.com/AboutNERC/Pages/Strategic-Documents.aspx>.

<sup>4</sup> See *Notice of Filing of the North American Electric Reliability Corporation for Approval of Retirement of Requirements in Reliability Standards*, filed March 19, 2013.

- The revision and streamlining of entire families of Reliability Standards, including the INT Reliability Standards<sup>5</sup> and the Transmission Operations (“TOP”) and Interconnection Reliability Operations and Coordination (“IRO”) Reliability Standards.<sup>6</sup>
- Implementation of enhanced processes for performing periodic reviews of Reliability Standards, including a new grading process to measure content and quality.

In addition to these standards development-related efforts, NERC and the Regional Entities have completed the implementation of risk-based compliance and enforcement processes across the ERO Enterprise.

Through its experience successfully completing over 100 standards projects, and informed by the improvement efforts highlighted above, NERC has developed a more sophisticated understanding of what a Reliability Standard should be and how it should be written. With the benefit of experience, NERC determined that it was an appropriate time to initiate a comprehensive and critical review of the body of NERC Reliability Standards. At this time, approximately 475 continent-wide Reliability Standard requirements are in effect in North America, addressing various aspects of BPS planning, operations, and cyber and physical security. NERC initiated the Standards Efficiency Review to determine whether there were opportunities to improve the overall effectiveness and efficiency of its Reliability Standards consistent with its regulatory philosophy, which consists of several key elements including the following:

- Reliability Standards should be developed using a results-based approach that focuses on performance, risk management, and entity capabilities, rather than prescribing specific processes for an entity to follow.

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<sup>5</sup> NERC submitted the revised INT standards on March 1, 2014. *See Notice of Filing of the North American Electric Reliability Corporation of Proposed Reliability Standards for Interchange Scheduling and Coordination.*

<sup>6</sup> NERC submitted the revised TOP and IRO Reliability Standards on March 25, 2015. *See Notice of Filing of the North American Electric Reliability Corporation of Proposed Transmission Operations and Interconnection Reliability Operations and Coordination Reliability Standards.*



- Reliability Standards should be focused on advancing reliability; they should not prescribe commercial business practices which do not contribute directly to reliability.
- Reliability Standard requirements should be organized logically and efficiently, both to aid ease of use and to avoid duplication and conflict among requirements.

For the first phase of work, review teams consisting of industry experts in Real-time operations, long-term planning, and operations planning performed a comprehensive review of the operations and planning Reliability Standards (i.e., excluding the Critical Infrastructure Protection (“CIP”) Reliability Standards). The purpose of this review was to identify Reliability Standard requirements that provide little or no benefit to reliability and should be retired. An important part of this review was exploring the relationships between the different Reliability Standards in a deeper way than would be feasible during a targeted periodic review of a Reliability Standard or Reliability Standard family. This in-depth review allowed NERC to identify redundancies among the requirements, the removal of which would improve administrative efficiency without harming reliability. The review process was conducted in an open and transparent manner, with broad industry participation. NERC then initiated the standard development process to consider the retirement recommendations resulting from the phase one work.

As discussed more fully in this filing, NERC proposes revisions to the IRO-002, TOP-001, and VAR-001 Reliability Standards which would result in the retirement of four requirements related to planning for next-day operations. Three of the requirements, in the IRO-002 and TOP-001 Reliability Standards, require the Reliability Coordinator, Transmission Operator, and Balancing Authority to have data exchange capabilities with the entities from which it needs data to perform Operational Planning Analyses and to develop Operating Plans for next-day operations. The remaining requirement, in the VAR-001 Reliability Standard, requires the Transmission

Operator to schedule sufficient reactive resources to regulate voltage levels under normal and Contingency conditions.

Through the review process described above, NERC determined that these four requirements are in fact redundant to other Reliability Standards, because the performance required by these requirements is inherent to the performance of other Reliability Standard requirements. Retirement of these requirements would not have an adverse impact to reliability. Retiring redundant requirements would benefit reliability by allowing entities to focus their resources on those Reliability Standard requirements that promote the reliable operation and planning of the BPS and avoid unnecessary compliance burdens. The proposed Reliability Standards described in this filing are just, reasonable, not unduly discriminatory or preferential, and in the public interest.

Work continues under the second phase of the Standard Efficiency Review to consider recommendations for Reliability Standard revisions which would further improve the efficiency of the body of NERC Reliability Standards, such as through consolidation of Reliability Standard requirements. The review teams are also expected to consider recommendations for standards-based improvements that would further reduce inefficiencies and promote effectiveness going forward. NERC would submit separate filings to address any such proposals at the appropriate time.

## **II. NOTICES AND COMMUNICATIONS**

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

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## **III. BACKGROUND**

### **A. NERC Reliability Standards Development Procedure**

The proposed Reliability Standards and retirements discussed in this filing were 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.<sup>7</sup>

NERC's rules provide for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing Reliability Standards, and thus satisfy several 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. Stakeholders must approve, and the NERC Board of Trustees must adopt, a new or revised Reliability Standard before NERC submits the Reliability Standard to the applicable governmental authorities. Similarly, stakeholders and the NERC Board of Trustees

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<sup>7</sup> The NERC Rules of Procedure, including Appendix 3A, NERC Standard Processes Manual, are available at <http://www.nerc.com/AboutNERC/Pages/Rules-of-Procedure.aspx>.

must approve the retirement of a Reliability Standard before the retirement is submitted to the applicable governmental authorities.

#### **B. Project 2018-03 Standards Efficiency Review Retirements**

In 2018, NERC initiated Project 2018-03 Standards Efficiency Review Retirements to consider the Reliability Standard Retirement recommendations from the first phase of the Standards Efficiency Review. In total, the Project 2018-03 standard drafting team evaluated recommendations from the Standards Efficiency Review to: (i) withdraw one proposed Reliability Standard in its entirety, consisting of six requirements; and (ii) retire 99 Reliability Standard requirements and one requirement part, including the retirement of 12 Reliability Standards in their entirety.

For the reasons explained in **Exhibit E**, the standard drafting team determined to: (i) withdraw one proposed Reliability Standard; and (ii) retire 77 Reliability Standard requirements and one requirement part, including the four requirements in the IRO-002, TOP-001, and VAR-001 Reliability Standards that are addressed in this filing.

The proposed Reliability Standards were posted for formal comment and ballot from February 27, 2019 to April 12, 2019 and for final ballot from April 23, 2019 to May 2, 2019. Having achieved the requisite quorum and ballot body approval percentages, the NERC Board of Trustees adopted the proposed Reliability Standards on May 9, 2019. A summary of the development history and the complete record of development is attached to this filing as **Exhibit F**.

#### **IV. JUSTIFICATION**

In this filing, NERC proposes three revised Reliability Standards in which requirements from the currently effective Reliability Standards are proposed to be retired:

- IRO-002-7 – Reliability Coordination – Monitoring and Analysis (retiring Requirement R1)
- TOP-001-5 – Transmission Operations (retiring Requirements R19 and R22)
- VAR-001-6 – Voltage and Reactive Control (retiring Requirement R2).

For the reasons set forth below, NERC has determined that none of the requirements proposed for retirement in the proposed Reliability Standards are necessary for reliability because the required performance is addressed adequately through other Reliability Standards. NERC has determined that, in the interest of advancing an efficient and effective body of Reliability Standards that removes redundant requirements as they are identified and eliminates unnecessary compliance documentation burdens, these requirements should be retired. Three of the requirements proposed for retirement in proposed Reliability Standards IRO-002-7 and TOP-001-5 relate to data exchange capabilities for Operational Planning Analyses and next-day operations. As the requirements and rationale for retirement are similar, NERC addresses them together in Section IV.A. The retirement of Requirement R2 in proposed Reliability Standard VAR-001-6 is discussed separately in Section IV.B.

As shown in the redlines included in **Exhibit A**, for each instance in which NERC has proposed to retire a Reliability Standard requirement, NERC has struck the Retirement in its entirety and replaced the text with the word “Reserved.” Corresponding revisions have also been made to the VRFs, VSLs, measures, and, where present, the supplemental material included as information.

#### **A. Reliability Standards IRO-002-7 and TOP-001-5**

This section provides the relevant procedural history of the IRO-002 and TOP-001 Reliability Standards and the rationale for the proposed requirement retirements reflected in proposed Reliability Standards IRO-002-7 and TOP-001-5.

## 1. Procedural History

In Order No. 817, FERC approved a suite of revised TOP and IRO Reliability Standards, including Reliability Standards IRO-002-4 – Reliability Coordination – Monitoring and Analysis and TOP-001-3 – Transmission Operations.<sup>8</sup> In the underlying proceeding, FERC stated that Reliability Standards IRO-002-4 and TOP-001-3 appeared to address facilities for data exchange capabilities, an issue it previously raised in the proceeding for approval of Reliability Standard COM-001-2.<sup>9</sup> In Order No. 817, FERC directed NERC to revise the standards to address, among other things, redundancy and diverse routing of Transmission Operator, Balancing Authority, and Reliability Coordinator data exchange capabilities and testing of alternative or less frequently used data exchange capabilities.<sup>10</sup>

NERC developed currently effective Reliability Standards IRO-002-5 – Reliability Coordination – Monitoring and Analysis and TOP-001-4 – Transmission Operations to address the Order No. 817 directives. Among other things, NERC revised three requirements related to Reliability Coordinator, Transmission Operator, and Balancing Authority data exchange capabilities (IRO-002-4 R1, TOP-001-3 R19 and R20). Previously, these requirements provided that the Reliability Coordinator, Transmission Operator, and Balancing Authority have data exchange capabilities with the entities from which data is needed to maintain reliability in the applicable entity’s area. NERC revised these requirements to apply only to data exchange capabilities for the exchange of data needed for Operational Planning Analyses and Balancing

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<sup>8</sup> *Transmission Operations Reliability Standards and Interconnection Reliability Operations and Coordination Reliability Standards*, Order No. 817, 153 FERC ¶ 61,178 (2015) (“Order No. 817”). NERC had submitted the revised TOP and IRO Reliability Standards to this authority on March 25, 2015.

<sup>9</sup> *Transmission Operations Reliability Standards and Interconnection Reliability Operations and Coordination Reliability Standards*, Notice of Proposed Rulemaking, 151 FERC ¶ 61,236 at P 67-68 (2015) (citing Order No. 808, 151 FERC ¶ 61,039 at P 54 (2015)).

<sup>10</sup> Order No. 817 at PP 47, 51.

Authority next-day Operating Plans, and it added new requirements to require that Reliability Coordinators, Transmission Operators, and Balancing Authorities have data exchange capabilities for the exchange of Real-time data needed for Real-time Assessments and Real-time monitoring that are redundant and diversely routed within the entity's primary Control Center.<sup>11</sup>

On June 10, 2019, NERC filed with the British Columbia Utilities Commission, the Alberta Electric System Operator, and the National Energy Board a notice of proposed Reliability Standard IRO-002-6, reflecting the addition of a new Variance for entities in the Western Electricity Coordinating Council region. None of the continent-wide requirements were changed in this version.

## **2. Justification**

The purpose of proposed Reliability Standard IRO-002-7, which remains unchanged from the currently effective version, is “to provide System Operators with the capabilities necessary to monitor and analyze data needed to perform their reliability functions.” The purpose of proposed Reliability Standard TOP-001-5, which likewise remains unchanged, is “to prevent instability, uncontrolled separation, or Cascading outages that adversely impact the reliability of the Interconnection by ensuring prompt action to prevent or mitigate such occurrences.”

In this filing, NERC proposes to revise the IRO-002 and TOP-001 Reliability Standards to retire three similar requirements related to data exchange capabilities for data needed for next-day planning because they are redundant to other requirements in the TOP and IRO Reliability Standards. Specifically, NERC proposes to retire Requirement R1 from currently effective Reliability Standard IRO-002-5 and Requirements R19 and R22 from currently effective Reliability Standard TOP-001-4.

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<sup>11</sup> See *Notice of Filing of NERC of Proposed Reliability Standards IRO-002-5 and TOP-001-4*, filed March 10, 2017 at 10-13.

When these data exchange capabilities requirements were originally developed in Reliability Standards IRO-002-4 and TOP-001-3, NERC believed that they were necessary as part of the overall framework of the TOP and IRO Reliability Standards.<sup>12</sup> Following revisions to these requirements, and upon further analysis of the relationships between the TOP and IRO Reliability Standards, NERC has concluded that Reliability Standard IRO-002-5 Requirement R1 and TOP-001-4 Requirements R19 and R22 are in fact redundant to other Reliability Standard requirements in the TOP and IRO Reliability Standards and provide no additional benefit to reliability. As explained below, other Reliability Standard requirements work together to require the same performance addressed in the requirements proposed for retirement.

In summary, each Reliability Coordinator, Transmission Operator, or Balancing Authority cannot perform the required Operational Planning Analyses or develop Operating Plans for next-day operations unless it obtains the data it needs from the relevant reporting entities, as set forth in its data specification. The relevant reporting entities cannot “satisfy” the obligations of such a data specification using mutually agreeable protocols unless they have some data exchange capability in place with the Reliability Coordinator, Transmission Operator, or Balancing Authority providing the specification. Thus, the obligation to have data exchange capabilities for Operational Planning Analyses and Operating Plans for next-day operations is inherent to the performance of these other Reliability Standard requirements, regardless of whether there is a separate Reliability Standard requirement expressly requiring such data exchange capabilities.

In the interest of promoting an effective and efficient body of Reliability Standards, one in which unnecessary and redundant requirements are removed as they are identified and unnecessary

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<sup>12</sup> See, e.g., *Notice of Filing of NERC of Proposed Transmission Operations and Interconnection Reliability Operations and Coordination Reliability Standards* at 23 and Exhibit A, Reliability Standard IRO-002-4, Rationale, (filed March 25, 2015).



compliance documentation burdens are avoided, NERC proposes to retire these requirements in proposed Reliability Standards IRO-002-7 and TOP-001-5.

A description of how each of these data exchange capability requirements is redundant to other TOP and IRO Reliability Standard requirements is provided below.

a) *IRO-002-5 Requirement R1*

Reliability Standard IRO-002-5 Requirement R1 states as follows:

**R1.** Each Reliability Coordinator shall have data exchange capabilities with its Balancing Authorities and Transmission Operators, and with other entities it deems necessary, for it to perform its Operational Planning Analyses.

NERC proposes to retire this requirement because it is unnecessary, in light of the performance required by other Reliability Standard requirements requiring the performance of Operational Planning Analyses and the development and satisfaction of data specifications for such analyses, as discussed below.

Under Reliability Standard IRO-008-2 Requirement R1, the Reliability Coordinator is obligated to perform Operational Planning Analyses to assess whether the planned operations for the next-day will exceed System Operating Limits and Interconnection Reliability Operating Limits within its Wide Area. To perform the required Operational Planning Analysis, the Reliability Coordinator must have the data it deems necessary from those entities that possess it.

Reliability Standard IRO-010-2 – Reliability Coordinator Data Specification and Collection provides requirements in support of data specification and provision for Operational Planning Analyses. The purpose of Reliability Standard IRO-010-2 is “to prevent instability, uncontrolled separation, or Cascading outages that adversely impact reliability, *by ensuring the Reliability Coordinator has the data it needs to monitor and assess the operation of its Reliability Coordinator Area*” (emphasis added). Reliability Standard IRO-010-2 requires the Reliability

Coordinator to maintain a documented specification for the data necessary for it to perform its Operational Planning Analyses (Requirement R1) and to distribute the specification to the entities from which it needs data (Requirement R2). Requirement R3 of the standard requires the entities receiving a data specification to satisfy it using a mutually agreeable format (R3.1), mutually agreeable process for resolving data conflicts (R3.2), and mutually agreeable security protocol (R.3.3).

For these obligations to be met, the Reliability Coordinator and the reporting entity must have data exchange capabilities in place. This is true regardless of whether a separate requirement expressly requires the Reliability Coordinator to have data exchange capabilities in place. There is no independent reliability benefit to having a separate requirement expressly requiring data exchange capabilities to reinforce what is already required by the performance of these other obligations. Reliability Standard IRO-002-5 Requirement R1 is therefore unnecessary and redundant and should be retired.

b) *TOP-001-4 Requirements R19 and R22*

Reliability Standard TOP-001-4 contains Requirements for data exchange capabilities applicable to the Transmission Operator and Balancing Authority as follows:

**R19.** Each Transmission Operator shall have data exchange capabilities with the entities it has identified it needs data from in order to perform its Operational Planning Analyses.

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**R22.** Each Balancing Authority shall have data exchange capabilities with the entities it has identified it needs data from in order to develop its Operating Plan for next-day operations.

NERC proposes to retire these requirements because they are unnecessary, in light of the performance required by other Reliability Standard requirements requiring the performance of Operational Planning Analyses and the development of Operating Plans for next-day operations,

and the development and satisfaction of data specifications for such analyses.

Under Requirement R1 of Reliability Standard TOP-002-4 – Operations Planning, the Transmission Operator is obligated to perform Operational Planning Analyses that will allow it assess whether its planned operations for the next day within its Transmission Operator Area will exceed any of its System Operating Limits. Under Requirement R4, the Balancing Authority shall have an Operating Plan(s) for the next day that addresses expected generation resource commitment and dispatch, Interchange scheduling, demand patterns, and capacity and energy reserve requirements, including deliverability capacity. To develop the required Operational Planning Analyses and next-day Operating Plans, each Transmission Operator and Balancing Authority must have the data it deems necessary from those entities that possess it.

Reliability Standard TOP-003-3 – Operational Reliability Data provides requirements in support of data specification and provision for Operational Planning Analyses and Balancing Authority analysis functions. The purpose of Reliability Standard TOP-003-3 is “to ensure that the Transmission Operator and Balancing Authority have data needed to fulfill their operational and planning responsibilities.” Reliability Standard TOP-003-3 requires the Transmission Operator to maintain a documented specification for the data necessary for it to perform its Operational Planning Analyses (Requirement R1) and to distribute the specification to the entities from which it needs data (Requirement R3). Requirement R5 of the standard requires the entities receiving a data specification to satisfy it using a mutually agreeable format (R5.1), mutually agreeable process for resolving data conflicts (R5.2), and mutually agreeable security protocol (R5.3). Similar Requirements are applicable to the Balancing Authority (Requirements R2 and R4), and the entities receiving a data specification from the Balancing Authority (Requirement R5).

In order for these obligations to be met, each Transmission Operator and Balancing

Authority must have data exchange capabilities in place with its reporting entities. This is true regardless of whether a separate requirement expressly requires the Transmission Operator or Balancing Authority to have data exchange capabilities in place. There is no independent reliability benefit to having separate requirements for Transmission Operators and Balancing Authorities that expressly require data exchange capabilities to reinforce what is already required by the performance of these other obligations. Reliability Standard TOP-001-4 Requirements R19 and R22 are therefore unnecessary and redundant and should be retired.

For these reasons, NERC proposes to retire these redundant requirements in proposed Reliability Standards IRO-002-7 and TOP-001-5. The retirement of these requirements would not have an adverse impact on reliability and is in the public interest.

## **B. Reliability Standard VAR-001-6**

This section provides the relevant procedural history of the VAR-001 Reliability Standard and the rationale for the proposed retirement requirements reflected in proposed Reliability Standard VAR-001-6.

### **1. Procedural History and Purpose**

The currently effective version of the VAR-001 Reliability Standard, Reliability Standard VAR-001-5 – Voltage and Reactive Control, was submitted on September 14, 2018. This version of the standard contains a revised Variance for the Western Electricity Coordinating Council region; none of the continent-wide requirements were changed from the previous version. NERC last submitted substantive revisions to the continent-wide VAR-001 requirements on June 12, 2014, in Reliability Standard VAR-001-4.<sup>13</sup>

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<sup>13</sup> Subsequently, NERC submitted errata version VAR-001-4.1 September 2, 2015 and errata version VAR-001-4.2 on August 25, 2017.

## 2. Justification

The purpose of proposed Reliability Standard VAR-001-6, which remains unchanged from the currently effective version, is “to ensure that voltage levels, reactive flows, and reactive resources are monitored, controlled, and maintained within limits in Real-time to protect equipment and the reliable operation of the Interconnection.”

In proposed Reliability Standard VAR-001-6, NERC proposes to retire Requirement R2 of the currently effective standard on the basis that this requirement is redundant to those in other Reliability Standards and is not necessary for reliability.

Reliability Standard VAR-001-5 Requirement R2 provides as follows:

R2. Each Transmission Operator shall schedule sufficient reactive resources to regulate voltage levels under normal and Contingency conditions. Transmission Operators can provide sufficient reactive resources through various means including, but not limited to, reactive generation scheduling, transmission line and reactive resource switching, and using controllable load.

NERC has determined that the second sentence of Requirement R2 constitutes guidance or a measure which does not warrant a mandatory requirement provision.

NERC has determined that the first sentence of Requirement R2 is duplicative of other requirements in the TOP Reliability Standards which direct the Transmission Operator to plan and operate the system within System Operating Limit values (which includes system voltage limits).<sup>14</sup>

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<sup>14</sup> 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. System Operating Limits are based upon certain operating criteria. These include, but are not limited to:

- Facility Ratings (applicable pre- and post-Contingency Equipment Ratings or Facility Ratings)
- transient stability ratings (applicable pre- and post- Contingency stability limits)
- voltage stability ratings (applicable pre- and post-Contingency voltage stability)
- system voltage limits (applicable pre- and post-Contingency voltage limits)

If the Transmission Operator identifies no System Operating Limit exceedances, voltage or otherwise, then the Transmission Operator necessarily has enough reactive resources “scheduled” to maintain the reliability of its area. The remaining requirements in the VAR-001 Reliability Standard require the Transmission Operator to ensure that voltage, reactive flows, and reactive resources are monitored, controlled, and maintained within limits. In consideration of the actions required by these Reliability Standards, NERC has determined that there is no reliability need to have a separate Reliability Standard requirement in the VAR-001 standard expressly requiring the Transmission Operator to “schedule” sufficient reactive resources. That outcome is achieved through the execution of the other Reliability Standard requirements described in this section.

Reliability Standard TOP-001-4 Requirement R10<sup>15</sup> specifies what actions the Transmission Operator shall perform for determining System Operating Limits in its area; these actions include monitoring Facilities in its area and obtaining status and voltages for Facilities and non-Bulk Electric System facilities outside its area as needed. Reliability Standard TOP-002-4, Requirement R1 requires the Transmission Operator to have an Operational Planning Analysis that will allow it to assess whether its planned operations for the next day within its area, including any anticipated Contingencies (and with allowance for a variety of unanticipated Contingencies), will exceed any of its System Operating Limits. If the Transmission Operator identifies potential System Operating Limit exceedances as a result of this analysis, the Transmission Operator shall develop an Operating Plan for its next-day operations to address those potential exceedances. Reliability Standard TOP-001-4 Requirement R13 requires the Transmission Operator to ensure that a Real-time Assessment is performed at least once every 30 minutes. If a Transmission Operator identifies a System Operating Limit exceedance, Requirement R14 requires the

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<sup>15</sup> The TOP-001-4 Requirements discussed in this section are unchanged in proposed Reliability Standard TOP-001-5. *See infra* Section IV.A.

Transmission Operator to initiate its Operating Plan to mitigate the exceedance. Operating Plans address the use of reactive resources if needed to operate within System Operating Limits, as well as any other adjustment that may be needed.

The Transmission Operator uses a variety of tools to regulate voltage levels, including reactive control. Use of Real-time Contingency Analysis tools allows the Transmission Operator to determine specific actions to regulate voltage during Contingency conditions. The Transmission Operator also uses Real-time monitoring, allowing it to make Real-time decisions on voltage during normal conditions. These actions allow the Transmission Operator to quantify the use of reactive resources. As such, a separate requirement specifying that the Transmission Operator must schedule “sufficient” reactive resources for normal and Contingency conditions is redundant and unnecessary for reliability.

In the planning horizon, the Transmission Planning Reliability Standard TPL-001-4<sup>16</sup> requires each Planning Authority and Transmission Planner to conduct studies on its System to ensure that it operates reliably over a broad spectrum of System conditions and following a wide range of probable Contingencies. These studies include available reactive resource capabilities. If the System is unable to meet the performance requirements of the standard, a Corrective Action Plan must be developed. These Corrective Action Plans may include, as necessary, the amount of reactive resources needed. This helps to ensure that the System is planned such that the Transmission Operator will have available an adequate number of reactive resources to operate its area reliably during normal and Contingency conditions.

With respect to generator performance, Reliability Standard VAR-002-4.1 Requirement R1 provides that the Generator Owner shall operate its interconnected generators in the automatic

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<sup>16</sup> On December 14, 2018, NERC filed a notice of filing of proposed Reliability Standard TPL-001-5. This discussion is applicable to both the currently effective and proposed versions of the TPL-001-5 standard.

voltage control mode or as otherwise directed by its Transmission Operator except in certain enumerated circumstances. Requirement R2 provides that each Generator Owner shall maintain the generator voltage or Reactive Power schedule provided by its Transmission Operator.

The Reliability Standards described above provide a comprehensive and interdependent framework addressing System voltage needs in the operations and planning horizons. Given the relationship between these Reliability Standards, there is no need to have a distinct requirement expressly requiring the Transmission Operator to “schedule” sufficient reactive resources. This performance is already accomplished through the performance of other Reliability Standard requirements. There is no independent reliability benefit to maintaining a separate requirement to reinforce what is already required in the performance of other requirements. In the interest of maintaining an effective and efficient body of Reliability Standards, one in which unnecessary and redundant requirements are eliminated, and the burdens associated with demonstrating compliance with these redundant requirements are avoided, NERC proposes to retire Requirement R2 of the currently effective standard in proposed Reliability Standard VAR-001-5. Its retirement would not have an adverse impact on reliability and is in the public interest.

### **C. Enforceability of the Proposed Reliability Standards**

The proposed Reliability Standards contain Violation Risk Factors (“VRFs”) and Violation Severity Levels (“VSLs”) for each of the requirements. The VRFs and VSLs provide guidance on the way that NERC will enforce the requirements of the proposed Reliability Standards. The VRFs and VSLs are substantively unchanged from currently effective versions of the Reliability Standards, reflecting only those revisions necessary to effectuate the proposed requirement



retirements. As such, they continue to comport with NERC and FERC guidelines related to their assignment.

In addition, the proposed Reliability Standards also include measures that support the requirements by clearly identifying what is required and how the requirement will be enforced. The measures help ensure that the requirements will be enforced in a clear, consistent, and non-preferential manner and without prejudice to any party. The measures are substantively unchanged from currently enforceable versions of the Reliability Standards, reflecting only those revisions necessary to effectuate the proposed requirement retirements.

## **V. EFFECTIVE DATE**

The proposed implementation plan is attached to this filing as **Exhibit B**. In terms of proposed Reliability Standards IRO-002-7, TOP-001-5, and VAR-001-6 where approval by an applicable governmental authority is required, the standard shall become effective on the first day of the first calendar quarter that is three (3) months after the effective date of the applicable governmental authority's order approving the standard, or as otherwise provided for by the applicable governmental authority. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is three (3) months after the date the standard is adopted by the NERC Board of Trustees, or as otherwise provided for in that jurisdiction. The currently effective versions of the standards would be retired immediately prior to the effective date of the revised Reliability Standards.<sup>17</sup> This implementation timeline reflects consideration that entities may

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<sup>17</sup> NERC's proposed implementation plan proposes to retire Reliability Standard IRO-002-6, which is currently pending. Should proposed Reliability Standard IRO-002-7 be approved so that IRO-002-6 is superseded prior to ever becoming effective, NERC requests approval of the retirement of the currently effective version, Reliability Standard IRO-002-5, to be effective immediately prior to the effective date of IRO-002-7.

need time to update their internal systems and documentation to reflect the new Reliability Standard version numbers.

Respectfully submitted,

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**EXHIBITS A-B and D-G**

## EXHIBIT C

### Reliability Standards Criteria

]The discussion below explains how proposed Reliability Standards IRO-002-7, TOP-001-5, and VAR-001-6 meet or exceed 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 proposed Reliability Standards improve upon the currently effective versions of the Reliability Standards by retiring requirements that are redundant to other Reliability Standard requirements and are therefore not needed for reliability. Except for corresponding changes that are necessary to the Violation Risk Factors (“VRFs”), Violation Severity Levels (“VSLs”), and measures, no other changes are proposed. As such, each of the proposed Reliability Standards remains designed to achieve a specified reliability goal and continues to provide a technically sound means to achieve that goal, consistent with the currently effective versions of the standards.

**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 Standards are clear and unambiguous as to what is required and who is required to comply. Individual requirements from the currently effective versions of the Reliability Standards are proposed for retirement. NERC does not propose any changes to the applicability of the standards.

**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 Risk Factors (“VRFs”) and Violation Severity Levels (“VSLs”) for the proposed Reliability Standards continue to comport with NERC and FERC guidelines related to their assignment, as discussed further in **Exhibit D**. As noted therein, no changes are proposed to

the VRFs and VSLs from the currently effective versions of the standards beyond those necessary to reflect the retirement of individual requirements.

**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 Standards contain measures that support each requirement by clearly identifying what is required to demonstrate compliance. These measures help provide clarity regarding the manner in which the requirements will be enforced and help ensure that the requirements will be enforced in a clear, consistent, and non-preferential manner and without prejudice to any party. No changes are proposed to the measures from the currently effective versions of the standards beyond those necessary to reflect the retirement of individual requirements.

**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 Standards would achieve their reliability goals effectively and efficiently. The proposed Reliability Standards improve upon the currently effective Reliability Standards by retiring requirements that are redundant to other Reliability Standards and are therefore not needed for reliability, thereby improving the efficiency of the standards.

**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 Standards do not reflect a “lowest common denominator” approach. The requirement retirements reflected in the proposed Reliability Standards would improve the effectiveness and efficiency of the standards and would not result in adverse impacts to reliability.

- 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 Standards continue to apply throughout North America and do 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 Standards would have no undue negative impact on competition. The proposed Reliability Standards would continue to require the same performance by each of the applicable Functional Entities, minus the individual requirements proposed for retirement. The proposed Reliability Standards would not unreasonably restrict the available 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 implementation period for the proposed Reliability Standards is just and reasonable and allows entities sufficient time to update their internal documentation and other processes.

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

The proposed Reliability Standards were developed in accordance with NERC's ANSI-accredited processes for developing and approving Reliability Standards. **Exhibit F** includes a summary of the development proceedings and details the processes followed to develop the proposed Reliability Standards. These processes included, among other things, comment and ballot periods. Additionally, all meetings of the drafting team were properly noticed and open to the

public. The initial and final ballots achieved a quorum and exceeded the required ballot pool approval levels.

**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 request for approval of the proposed Reliability Standards. No comments were received that indicated the proposed Reliability Standards conflict with other vital public interests.

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

No other negative factors relevant to whether the proposed Reliability Standards are just and reasonable were identified.