VIA ELECTRONIC FILING

Mr. Patrick Wruck, Commission Secretary
British Columbia Utilities Commission
Box 250, 900 Howe Street
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Vancouver, B.C.
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Re: North American Electric Reliability Corporation

Dear Mr. Wruck:

The North American Electric Reliability Corporation hereby submits Notice of Filing of the North American Electric Reliability Corporation of Proposed Regional Reliability Standard FAC-501-WECC-2. 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/ Shamai Elstein

Shamai Elstein
Senior Counsel for the North American Electric Reliability Corporation

Enclosure
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 PROPOSED REGIONAL RELIABILITY STANDARD FAC-501-WECC-2

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**Exhibit A** Proposed Regional Reliability Standard FAC-501-WECC-2 – Transmission Maintenance

**Exhibit B** Implementation Plan for Proposed Regional Reliability Standard FAC-501-WECC-2

**Exhibit C** Reliability Standards Criteria for Proposed Regional Reliability Standard FAC-501-WECC-2

**Exhibit D** Analysis of Violation Severity Levels

**Exhibit E** Summary of Development History and Complete Record of Development

**Exhibit F** Standard Drafting Team Roster for Project WECC-0120 Transmission Maintenance Five-Year Review
NOTICE OF FILING OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION OF PROPOSED
REGIONAL RELIABILITY STANDARD FAC-501-WECC-2


Proposed Regional Reliability Standard FAC-501-WECC-2 (Exhibit A) is just, reasonable, not unduly discriminatory or preferential, and in the public interest.¹ NERC also provides notice of the associated implementation plan (Exhibit B), and the associated Violation Severity Levels ("VSLs") (Exhibit D), as detailed in this filing.

This filing presents the technical basis and purpose of the proposed Regional Reliability Standard, a summary of the development proceedings (Exhibit E), and a demonstration that the proposed Reliability Standard meets the Reliability Standards criteria (Exhibit C). Proposed Regional Reliability Standard FAC-501-WECC-2 was approved by the WECC Board of Directors on December 6, 2017 and by the NERC Board of Trustees on February 8, 2018.

I. EXECUTIVE SUMMARY

The purpose of FAC-501-WECC-2 is to ensure the Transmission Owner of a transmission path identified in the table titled “Major WECC Transfer Paths in the Bulk Electric System” (“WECC Transfer Path Table” or “Table”), including associated facilities, has a Transmission Maintenance and Inspection Plan (“TMIP”) and performs and documents maintenance and inspection activities in accordance with the TMIP. The proposed standard was developed following a periodic review of the currently-effective version of the standard, FAC-501-WECC-1, which became effective in 2011.

As a result of WECC’s periodic review, WECC revised the standard to clarify the Transmission Owner’s obligations with respect to the development, implementation, and review of TMIPs, and to directly incorporate the list of applicable transmission paths, thereby eliminating incorporation by reference to any extrinsic document. Proposed Regional Reliability Standard FAC-501-WECC-2 continues to remain more stringent than continent-wide standards and necessary for reliability in the Western Interconnection. The following filing presents the justification for proposed Regional Reliability Standard FAC-501-WECC-2 and the associated elements and supporting documentation.
II. NOTICES AND COMMUNICATIONS

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

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III. BACKGROUND

The following background information is provided below: (a) an explanation of the regulatory framework for Regional Reliability Standards; (b) an explanation of the WECC Regional Reliability Standards development process; and (c) the history of Project WECC-0120 FAC-501-WECC-1 Transmission Maintenance, Five-Year Review.

A. Regulatory Framework

A Regional difference from a continent-wide Reliability Standard must either be: (1) more stringent than the continent-wide Reliability Standard, or (2) necessitated by a physical difference in the Bulk-Power System. Due weight is given to the technical expertise of a Regional Entity, like WECC, that is organized on an Interconnection-wide basis with respect to a Regional Reliability Standard to be applicable within that Interconnection.
B. WECC Regional Reliability Standards Development Process

The proposed Regional Reliability Standard was developed in an open and fair manner and in accordance with the WECC Reliability Standards Development Procedures (“RSDP”). ² WECC’s RSDP provides for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing Reliability Standards and thus addresses certain of the criteria for approving Reliability Standards. The development process is open to any person or entity that is an interested stakeholder. WECC considers the comments of all stakeholders, and a vote of stakeholders and the WECC Board of Directors is required to approve a Regional Reliability Standard. Once the standard is approved by the WECC Board of Directors, NERC posts the approved Regional Reliability Standard for an additional comment period. Then the NERC Board of Trustees must adopt the Regional Reliability Standard before the Regional Reliability Standard is submitted to the applicable governmental authorities.

C. Approval of FAC-501-WECC-1

The Federal Energy Regulatory Commission (“FERC”) approved Regional standard FAC-501-WECC-1 in Order No. 751, issued in 2011. FAC-501-WECC-1 was developed to replace Regional Reliability Standard PRC-STD-005-1 to address FERC directives. ³ In approving the standard, FERC stated that it was more stringent than the then-effective NERC Reliability Standard PRC-005-1 “by virtue of its requirement for a highly detailed maintenance and inspection

plan for all transmission and substation equipment components associated with transmission paths identified in the WECC Transfer Path Table”.

D. Development of the Proposed Regional Reliability Standard

As further described in Exhibit E hereto, proposed Regional Reliability Standard FAC-501-WECC-2 was developed in accordance with the WECC RSDP, as part of a five-year review of FAC-501-WECC-1. On October 11, 2017, the fifth draft of proposed Regional Reliability Standard FAC-501-WECC-2 was approved by the WECC ballot body with 100 percent affirmative vote. The WECC Board of Directors approved the standard on December 6, 2017. NERC posted the standard for a 45-day comment period concluding on December 18, 2017. Commenters agreed that WECC’s process was open, inclusive, balanced, transparent, and that due process was followed, and there were no additional changes after this comment period. The NERC Board of Trustees subsequently adopted the Regional standard on February 8, 2018.

IV. JUSTIFICATION

The purpose of proposed Regional Reliability Standard FAC-501-WECC-2 is to ensure the Transmission Owner of a transmission path identified in the WECC Transfer Path table has a TMIP and performs and documents maintenance and inspection activities in accordance with the TMIP. The provisions of the proposed Regional standard provide specific requirements for implementing and maintaining comprehensive maintenance and inspection plans for transmission lines and substation equipment. Proposed FAC-501-WECC-2 builds upon the currently-effective version of the standard and improves it by clarifying the obligations of applicable Transmission Owners with respect to TMIPs and their required content. The proposed regional standard remains more stringent than its continent-wide counterparts in that it includes specific emphasis on the 40 major

paths of Attachment B not otherwise included elsewhere, applies a more stringent maintenance protocol to those paths, and specifies a broader range of elements for maintenance than those addressed in the continent-wide PRC Reliability Standards. The proposed changes are discussed in more detail below.

A. WECC Transfer Path Table

In proposed Regional Reliability Standard FAC-501-WECC-2, WECC has directly incorporated the list of applicable transmission paths thereby eliminating incorporation by reference to any extrinsic document. In currently-effective FAC-501-WECC-1, WECC removed the Table from the standard, replacing it with a link to the table on the WECC website.⁵ In response to FERC’s concerns, WECC agreed that no changes would be made to the Table without using an open and transparent process and notifying FERC accordingly. In the intervening years, WECC has made no revisions to this Table, although WECC has had to update the standard to reflect the new location of the Table on the WECC website.⁶ To avoid having to correct link locations in the future, the WECC drafting team and stakeholders agreed that the WECC Transfer Path Table should be included in the standard. By removing the extrinsic reference and incorporating the full content of the Table in the standard, FERC’s incorporation by reference concern from Order No. 751 is alleviated and any future changes to the Table would require the full due process afforded by the WECC RSDP.

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⁵ In Order No. 751, FERC restated its concern from the Notice of Proposed Rulemaking that, due to WECC removing the WECC Transfer Path Table from the standard and replacing it with a link to the table on the WECC website, the applicability of the standard “could change without review and approval by NERC and the Commission.” Order No. 751 at P 20. In response to WECC’s comments, FERC directed WECC to file its criterion for identifying and modifying major transmission paths listed in the tables on the WECC website before they become effective with concurrent notification to FERC, NERC and the industry. FERC stated, “We believe that this process balances the interests of WECC in developing timely revisions to the WECC Transfer Path Table with the need for adequate transparency for transmission owners that are affected by changes to the WECC Transfer Path Table.” Id. at P 24.

Other conforming changes include eliminating all links referencing this table and replacing the term “Table” with the term “Attachment B”.

**B. Other Clarifications**

The proposed Regional Reliability Standard FAC-501-WECC-2 includes several clarifications that improve upon the existing standard. Requirement R1 is revised to add language requiring each TMIP to contain, at a minimum, the items specified in Attachment A, Transmission Maintenance and Inspection Plan Content. The term “System Operating Limit” is removed from Requirement R1 to remain consistent with the revised System Operating Limit methodology instituted by Peak Reliability effective April 1, 2017 which decouples the concepts of System Operating Limits and paths as they have traditionally been understood in the Western Interconnection.⁷

Requirement R1 now consists of two separate Requirements: the requirement to “have a TMIP” (Requirement R1) and to “annually update it to reflect all changes” (Requirement R2).

Requirement R3 is revised to provide that each Transmission Owner shall adhere to its TMIP (revised from “implement and follow” its TMIP).

Attachment A was revised clarifying the required contents of TMIPs and removing “and/or” statements. The term “contamination control” was removed due to ambiguity. The specific reference to “regulators” was determined to be an unnecessarily detailed subset of power transformers and was also removed.

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⁷ See Exhibit E, Posting 1 Response to Comments at 4-6 (responding to comments submitted by Bonneville Power Administration). For additional information on the shift away from the path-centric model to the framework established in the continent-wide TOP and IRO Reliability Standards, see generally FERC Docket No. RD16-10-000 (retirement of TOP-007-WECC-1a).
C. **Enforceability of Proposed Regional Reliability Standard FAC-501-WECC-2**

The proposed regional Reliability Standard includes VRFs and VSLs. The VSLs provide guidance on the way that NERC will enforce the requirements of the proposed regional Reliability Standard. The VRFs are one of several elements used to determine an appropriate sanction when the associated requirement is violated. The VRFs assess the impact to reliability of violating a specific requirement. The VRFs and VSLs for the proposed regional Reliability Standard comport with NERC and FERC guidelines related to their assignment. In proposed Reliability Standard FAC-501-WECC-2, the VRFs remain unchanged from the related Requirements in currently-effective FAC-501-WECC-1. The VSL section has been changed to match the current NERC table format and the revised language of underlying Requirements. The VSLs for the proposed Regional Reliability Standard comport with NERC and FERC guidelines related to their assignment.

The proposed Regional Reliability Standard also includes Measures that support each requirement by clearly identifying what is required and how the requirement will be enforced. These Measures help ensure that the requirements will be enforced in a clear, consistent, and non-preferential manner and without prejudice to any party.

V. **EFFECTIVE DATE**

The proposed implementation plan is provided in Exhibit B hereto. Under the proposed implementation plan, proposed Reliability Standard FAC-501-WECC-2 would become effective on the first day of the first calendar quarter after applicable regulatory approval.
Respectfully submitted,

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Date: March 22, 2018
EXHIBITS A — B and D -- F
NERC is responsible for the activities governing “the development, approval, revision, reaffirmation, and withdrawal of Reliability Standards, Interpretations, Violations Risk Factors (VRF), Violation Severity Levels (VSL), definitions, Variances, and reference documents developed to support standards for the Reliable Operation and planning of the North American Bulk Power Systems”.¹

The following discussion explains how the proposed Regional Reliability Standard (RRS) meets or exceeds the Reliability Standards criteria.²

² NERC Rules of Procedure, Definitions Used in Rules of Procedure, Appendix 2 to the Rules of Procedure, page 19, October 31, 2016. See also NERC Rules of Procedure, Section 300 Reliability Standards development, Sub-section 312.1 Regional Reliability Standards, indicating that Regional Reliability Standards “shall in all cases be submitted to NERC for adoption and, if adopted, made part of the NERC Reliability Standards and shall be enforceable in accordance with the delegation agreement between NERC and the Regional Entity or other instrument granting authority over enforcement to the Regional Entity.”
1. Proposed Reliability Standards must be designed to achieve a specified reliability goal.

“NERC Reliability Standards are based on certain reliability principles that define the foundation of reliability for North American Bulk Power Systems. Each Reliability Standard shall enable or support one or more of the reliability principles, thereby ensuring that each Reliability Standard serves a purpose in support of reliability of the North American Bulk Power Systems. Each Reliability Standard shall also be consistent with all of the reliability principles, thereby ensuring that no standard undermines reliability through an unintended consequence.”

Of NERC’s eight NERC Reliability Principles, FAC-501-WECC-2 meets:

Reliability Principle 3

“Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.”

2. Proposed Reliability Standards must contain a technically sound method to achieve the goal.

Standard Development

This project was developed in accordance with the WECC Reliability Standards Development Procedures (Procedures), as approved by NERC, in effect at each point in the process. Among other things, the Procedures require that drafting be conducted by a team of Subject Matter Experts (SME). Biographies of those SMEs are provided with this filing.

These processes also include repeated public iterative comment/response cycles whereby comments are received from the industry and responses to those comments are provided by the drafting team.

Technically Sound

The Federal Energy Regulatory Commission (FERC) found Version 1 of this standard to be technically sound in FERC Order 751.4

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4 Order 751, 135 FERC ¶ 61,061, United States of America, Federal Energy Regulatory Commission, 18 CFR Part 40, Docket No. RM09-9-000; Version One Regional Reliability Standards for Facilities Design, Connections, and Maintenance; Protection and Control; and Voltage and Reactive, issued April 21, 2011
Because the proposed changes either fill in a logical void or clarify the existing document, no additional technical justification is offered.

This project: 1) adds a requirement to follow the Transmission Maintenance Inspection Plan (TMIP) as opposed to simply having a TMIP, 2) updates Attachment A TMIP Content, reducing ambiguity in the attachment, 3) eliminates incorporation by reference of the “Major WECC Transfer Paths in the Bulk Electric System” table in favor of full inclusion as Attachment B, and 4) updates the content and format of the compliance sections to incorporate NERC styles, format, and standardized language.

3. Proposed Reliability Standards must be applicable to users, owners, and operators of the Bulk Power System, and not others.

The Applicability section of the proposed Reliability Standard is as follows:

Applicable Entities

4. Applicability

4.1. Transmission Owners that maintain the transmission paths in Attachment B.

4. Proposed Reliability Standards must be clear and unambiguous as to what is required and who is required to comply.

The WECC-0120 FAC-501-WECC-2, Transmission Maintenance project is the result of a five-year review required under the Procedures. The Standard Authorization Request identified no specific issues nor did it suggest that any specific changes be made.

The project clearly states the tasks each applicable entity must complete, how performance of the tasks will be measured, and compliance elements indicating how lack of performance will be addressed.

Per the Procedures, the project was posted for comment five times.

In Posting 2, the drafting team opted not to change language of Requirement R1 because the proposed changes added no additional clarity but would have the effect of expanding the Applicability section of the standard without providing justification for the change.

In Posting 3, the drafting team addressed ambiguities by: 1) correcting the plural tense of some phrases, 2) eliminating an and/or statement in Attachment A, and 3) adopting NERC’s formatting and boilerplate language for compliance sections.
In Posting 4, the drafting team merged a continuum of language from various requirements to eliminate any single requirement containing multiple required tasks.

In Posting 5, the language of Measure M3 was streamlined to eliminate ambiguity.

For more information on the specifics of these changes please review Attachments R1-R5 of this filing.

5. Proposed Reliability Standards must include clear and understandable consequences and a range of penalties (monetary and/or non-monetary) for a violation.

Table of Compliance Elements

FAC-501-WECC-2, Transmission Maintenance, Section C – Compliance has been updated to reflect the current language used in new NERC Standards.

Violation Risk Factors (VRF)\(^5\)

No changes were made to the Violation Risk Factors.

Violation Severity Levels (VSL)\(^6\)

The drafting team used NERC’s Violation Severity Level Guidelines (VSL) to review and complete an up-to-date VSL table where none previously existed. The drafting team used the Version 1 VSL narrative to populate the Version 2 VSL table, interpolating where necessary to achieve the required compliance tiers, and correcting the narrative to ensure the VSL had an actual relationship to the task impacted (eliminating apples-to-oranges narrative). See Response to Comments, Posting 4 for further detail (Attachment R4).

6. Proposed Reliability Standards must identify a clear and objective criterion or measure for compliance, so that it can be enforced in a consistent and non-preferential manner.

NERC’s most recent Compliance section narrative was included.

Each Requirement has a corresponding Measure.

Each Requirement has been assigned a Violation Risk Factor.

\(^5\) NERC Criteria for Violation Risk Factors
\(^6\) NERC Violation Severity Level Guidelines
Each Requirement has been assigned a tiered Violation Severity Level.⁷

7. Proposed Reliability Standards should achieve a reliability goal effectively and efficiently - but does not necessarily have to reflect “best practices” without regard to implementation cost.

During the five postings, the cost issue was neither raised nor addressed.

The reliability goal of the project is to ensure that Transmission Owners maintaining specified paths have a TMIP and use that plan. The project calls for a high-level TMIP without precluding additional detail.

8. Proposed Reliability Standards cannot be “lowest common denominator”.

Version 2 largely maintains the tasks and burdens included in Version 1; albeit, with greater clarity and adoption of updated drafting conventions.

9. Proposed Reliability Standards may consider costs to implement for smaller entities but not at consequence of less than excellence in operating system reliability.

During the five postings at WECC the industry raised no cost concerns.

10. 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 area or approach.

In the Order 740 Remand at P4, FERC states that:

“Reliability Standards that the ERO proposes to the Commission may include Reliability Standards that are proposed to the ERO by a Regional Entity... When the ERO reviews a regional Reliability Standard that would be applicable on an interconnection-wide basis and that has been proposed by a Regional Entity organized on an interconnection-wide basis, the ERO must rebuttably presume that the regional Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public

⁷ Where required performance cannot be broken down into compliance tiers, those requirements require assignment of a “severe” VSL. NERC Violation Severity Level Guidelines, page 2.
interest. In turn, the Commission must give “due weight” to the technical expertise of the ERO and of a Regional Entity organized on an interconnection-wide basis.”

Further, regional entities “may propose Regional Reliability Standards that set more stringent reliability requirements than the NERC Reliability Standard or cover matters not covered by an existing NERC Reliability Standard.”

In accordance with FERC Orders 751, paragraph 11, Version One was found to be applicable solely within the Western Interconnection, and more stringent than NERC Standards. Version Two does not change that finding.

11. Proposed Reliability Standards should cause no undue negative effect on competition or restriction of the grid.

The assigned drafting team does not foresee any negative impacts on competition resulting from changes made in Version Two.

In the five postings at WECC, the industry raised no concerns regarding competition or restrictive use of the grid.

12. The implementation time for the proposed Reliability Standards must be reasonable.

Per the Procedures, an implementation plan was posted for comment during at least one of the five postings for comment. See Attachment F – Implementation Plan.

Conforming Changes to Other Standards

There are no conforming changes to other standards required to implement the proposed document.

Proposed Effective Date

The Effective Date is proposed to be the first day of the first quarter following applicable regulatory approval.

Justification

8 NERC Rules of Procedure, Section 312, Regional Reliability Standards.
The WECC-0120, FAC-501-WECC-2, Transmission Maintenance Drafting Team (DT) reviewed NERC Standards, both in effect and those standards that have been approved by the NERC Board of Trustees but pending final regulatory disposition. The DT concluded that the proposed substantive changes pose a minimal burden beyond current reasonable and customary operations. As such, the implementation time should impose no undue burden.

**Consideration of Early Compliance**

The drafting team foresees no concerns with early compliance.

**Required Retirements**

The currently approved standard, FAC-501-WECC-1, should be retired immediately prior to the Effective Date of this version, FAC-501-WECC-2. No other retirements or modifications are needed.

13. **The Reliability Standard development process must be open and fair.**

The WECC Procedures, as approved by WECC/NERC, were used during each development step of this project.

In accordance with the Procedures, all drafting team meetings were open to the public.

All drafting team meetings were announced via the WECC Standards Email List for the prescribed period, prior to each meeting. Notice of each meeting was provided to NERC and posted on the WECC Calendar along with meeting minutes.

All meetings were supported by a telephone conference bridge associated with an online internet visual capability allowing all participants to see the document(s) as they were being developed. Further, this team held an open-mic Standards Briefing prior to balloting affording the industry an additional opportunity to have any questions addressed.

The project was also posted for comment at NERC in accordance with NERC’s Rules of Procedures.

Comments and responses to comments are found in their original format on the [WECC-0120 Project Page](#) on the Submit and Review project accordion.

14. **Proposed Reliability Standards must balance with other vital public interests.**

WECC is not aware of any other vital public interests. No such concerns were raised or noted.
15. Proposed Reliability Standards must consider any other relevant factors.

WECC is not aware of any other general factors in need of consideration.