

December 18, 2019

**VIA ELECTRONIC FILING**

Michael Law  
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. Law:

The North American Electric Reliability Corporation (“NERC”) hereby submits North American Electric Reliability Corporation Informational Filing of Reliability Standards Development Plan 2020-2022.

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

Respectfully submitted,

/s/ Lauren Perotti

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*Senior Counsel for the North American Electric  
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Enclosure

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**BEFORE THE  
ALBERTA ELECTRIC SYSTEM OPERATOR**

**NORTH AMERICAN ELECTRIC )  
RELIABILITY CORPORATION )**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION  
INFORMATIONAL FILING OF RELIABILITY STANDARDS DEVELOPMENT PLAN  
2020–2022**

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December 18, 2019

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**Attachment A**      *Reliability Standards Development Plan: 2020–2022*

**BEFORE THE  
ALBERTA ELECTRIC SYSTEM OPERATOR**

**NORTH AMERICAN ELECTRIC )  
RELIABILITY CORPORATION )**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION  
INFORMATIONAL FILING OF RELIABILITY STANDARDS DEVELOPMENT PLAN  
2020–2022**

The North American Electric Reliability Corporation (“NERC”) hereby submits its 2020–2022 Reliability Standards Development Plan (“2020 Development Plan”) in accordance with Section 310 of the NERC Rules of Procedure.<sup>1</sup> The 2020 Development Plan, included herein as **Attachment A**, provides a status update on active development projects, a forecast of future work to be undertaken by NERC and its stakeholders throughout the upcoming year, and an analysis comparing completed projects and development accomplishments with the prior year’s Reliability Standards Development Plan. The NERC Board of Trustees (“NERC Board”) approved the 2020 Development Plan on November 5, 2019. NERC submits this filing and the attached 2020 Development Plan for informational purposes only.

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<sup>1</sup> Section 310 of NERC’s Rules of Procedure requires NERC to develop and provide an annual Reliability Standards Development Plan for development of Reliability Standards to the applicable governmental authorities. Under that section, NERC is also required to consider comments and priorities of the applicable governmental authorities in any updates made to the plan, and the plan should compare current accomplishments with the prior year’s plan. See NERC’s Rules of Procedure, accessible online at: <https://www.nerc.com/AboutNERC/Pages/Rules-of-Procedure.aspx>.

## **I. NOTICES AND COMMUNICATIONS**

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

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## **II. BACKGROUND**

Pursuant to Section 310 of the NERC Rules of Procedure, NERC submitted an initial version of a plan for Reliability Standards development, titled the *Reliability Standards Development Plan: 2007–2009*, in 2006. NERC has since updated the plan annually, and the 2020–2022 version of the plan is presented in this filing. Consistent with previous versions, the 2020 Development Plan is filed for informational purposes and no specific action is requested at this time.

The 2020 Development Plan is intended to:

1. Serve as a management tool to guide and coordinate the development of Reliability Standards and provide benchmarks for assessing progress;
2. Serve as a communication tool for coordinating standards development work with applicable governmental agencies in the United States and Canada and for engaging stakeholders in Reliability Standards development activities; and
3. Provide a basis for developing annual plans and budgets for the NERC Reliability Standards Program.

As with each prior year's plan, NERC obtained stakeholder input on the 2020 Development Plan. As detailed in Section III, NERC submits this filing to summarize the 2020 Development

Plan and inform the applicable governmental authorities and other interested parties of projects noted in the 2019 Development Plan that will continue into 2020.

### **III. 2020 DEVELOPMENT PLAN**

#### **A. Summary of the 2020 Development Plan**

The 2020 Development Plan identifies the current plans and priorities for development and modification of NERC Reliability Standards in the immediate three-year time horizon. NERC anticipates that the Reliability Standards development work outlined in the 2020 Development Plan will be dynamic and will be updated periodically as projects are completed or as new needs are identified and projects are considered. NERC also recognizes Reliability Standards development in 2020 may require flexibility in planning to ensure that activities are given appropriate resources and priority.

The 2020 Development Plan builds upon the work of previous years in transforming the body of NERC Reliability Standards into a mature state. The 2020 Development Plan continues that work by shifting the focus of the standards program to Periodic Reviews, Federal Energy Regulatory Commission (“FERC”) directives, emerging risks, Standards Authorization Requests, and the Standards Efficiency Review (“SER”) project. Also, the Standards Grading that was paused due to the SER project will resume in 2020.

Periodic Reviews and initiatives, such as the Standards Efficiency Review (now in its second phase), enable NERC to identify requirements that do little to promote reliability, and should therefore be retired. As with the 2019 plan, Periodic Reviews will occur at a measured pace compared to the level of activity and pace of standards development during recent years. Additionally, Periodic Reviews will be aligned with the strategic consideration of reviewing standard families that are interrelated.

While most of the work in the next three years will focus on Periodic Reviews, SER implementation, and Standards Grading, projects to develop new or revised Reliability Standards may be initiated in response to FERC directives or to address new or emerging risks. To identify reliability risks, NERC will continue to seek input and recommendations from the Reliability Issues Steering Committee (“RISC”) and employ feedback from sources such as the Compliance Monitoring and Enforcement Program, RISC profiles, Events Analysis, Compliance violation statistics, published “Lessons Learned,” and any feedback from Regional Entities. Input into standards will also continue to be coordinated with the North American Energy Standards Board as appropriate. In assessing feedback to create new or revised standards, NERC will focus on risk, reliability or security data, and enforcement information to determine whether a standard revision is the best tool to initially address the reliability risk. Projects to develop new or revised Reliability Standards may also be initiated in response to standard authorization requests, such as those submitted in response to the work of the various NERC technical committees and working groups thereunder.

## **B. 2019 Progress Report**

The 2019 Development Plan identified nine standard development and periodic review projects that would be initiated in 2019 or continue from 2018. The projects and their current status are noted below. Additional project information is available on the NERC website on the Standards web page.<sup>2</sup>

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<sup>2</sup> NERC Reliability Standards, <https://www.nerc.com/pa/Stand/Pages/default.aspx>.

## 1. Projects Completed in 2019

Several projects (or portions of projects) identified in the 2019 Development Plan were completed in 2019. These projects, along with when the associated standard(s) were adopted by the NERC Board of Trustees, are identified below:

- Project 2016-02 Modifications to CIP Standards (CIP-003 directive on malicious code) (adopted by the Board in May 2019);
- Project 2018-01 Canadian-specific Revisions to TPL-007-2 (adopted by the Board in February 2019);
- Project 2018-02 Modifications to CIP-008 Cyber Security Incident Reporting (adopted by the Board in February 2019);
- Project 2018-03 Standards Efficiency Review Retirements (adopted by the Board in May 2019); and
- Project 2017-01 Modifications to BAL-003-1.1 (phase 1) (adopted by the Board in November 2019).

Additionally, in 2019 NERC continued work under the second phase of the Standards Efficiency Review. Work on this initiative is set to continue into 2020.

## 2. Projects Continuing in 2020

The following standard development projects identified in the 2019 Development Plan will continue into 2020:

- Project 2015-09 Establish and Communicate System Operating Limits;
- Project 2016-02 Modifications to CIP Standards (virtualization);
- Project 2017-01 Modifications to BAL-003-1.1 (phase 2);
- Project 2017-07 Standards Alignment with Registration (projected to be adopted by the Board in February 2020);
- Project 2017-03 FAC-008-3 Periodic Review;
- Project 2017-04 Periodic Review of Interchange Scheduling and Coordination Standards; and



- Project 2017-05 NUC-001-3 Periodic Review.

Each of these projects are identified and prioritized in the 2020 Development Plan, as described in the following section.<sup>3</sup>

### **C. Prioritization of 2020 Projects**

For each new or continuing Reliability Standard Project identified in the 2020 Development Plan, the NERC Standards Committee has assigned a priority of either high, medium, or low. These rankings are in addition to priority assignments made in previous plans for ongoing projects, and the assignments are based on the following criteria: (i) outstanding regulatory directives with filing deadlines (high priority); (ii) RISC category rankings of high impact with consideration of probability of occurrence (high or medium priority); (iii) potential reliability risks identified through feedback mechanisms (high, medium, or low priority, based on the risk); (iv) outstanding regulatory directives without regulatory deadlines or regulatory considerations (high or medium priority); (v) outstanding requirements that are known candidates for retirement (medium or low priority); and (vi) any known adverse content and quality assessment (likely low priority). The new and continuing projects identified in the 2020 Development Plan and their assigned priority category are provided below.

#### **High Priority**

- Project 2015-09 Establish and Communicate System Operating Limits (FAC-010, FAC-011, and FAC-014);
- Project 2016-02 Modifications to CIP Standards (virtualization);
- Project 2018-04 Modifications to PRC-024-2;
- Project 2019-01 Modifications to TPL-007-3;

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<sup>3</sup> The outstanding periodic review projects are not prioritized. These projects, which were paused at the start of the Standards Efficiency Review, are expected to formally conclude in early 2020.

- Project 2019-03 Cyber Security Supply Chain Risks; and
- Project 2019-06 Cold Weather Preparedness.

### **Medium Priority**

- Project 2017-01 Modifications to the BAL-003-1.1 (phase 2);
- Project 2019-02 BES Cyber System Information Access Management; and
- Project 2019-05 Modifications to PER-003-2.

### **Low Priority**

- Project 2019-04 Modifications to PRC-005-6.

In 2018, NERC initiated Project 2018-03 Standards Efficiency Review Retirements to consider recommendations for retirements from the first phase of the SER; this project completed in 2019. Work will continue on the second phase of the SER in 2020. The second phase of the SER will determine if there are additional requirements that could be retired by making small modifications to the standard, as opposed to retiring whole standards or requirements as written. The next phase will also review the CIP family of standards.

NERC will continue to coordinate with the industry team to ensure all of the information developed through previous Standards Grading efforts, which includes consideration of content, quality, cost, and reliability impact analysis, align with projects under the SER initiative. Thus, some projects, such as the Standards Alignment with Registration and periodic review projects, may have some natural synergies that allow for other projects to be combined with the SER initiative.

Currently, no Reliability Standards are due for periodic review in 2020, but any outstanding

or paused Periodic Review projects will be completed. NERC will coordinate the timing of Periodic Reviews with the next phase of the SER project to ensure the initiatives work together to review the standards that may need to be modified. As noted above, the Standards Grading effort will resume in 2020.

Other projects may be initiated in 2020 based on new standard authorization requests, emerging risks to the Bulk Power System, or new regulatory directives. The Standards Committee has prioritized current and upcoming projects, as communicated through prioritization schedules and project plans, to ensure that development moves at a measured and sustainable pace.

#### **IV. CONCLUSION**

As discussed above, the 2020 Development Plan was developed in accordance with Section 310 of the NERC Rules of Procedure and identifies the current plans and priorities for development and modification of NERC Reliability Standards in the immediate three-year time horizon. NERC submits this filing and the attached 2020 Development Plan for informational purposes only.

Respectfully submitted,

/s/ Lauren A. Perotti

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Date: December 18, 2019

**ATTACHMENT A**

**RELIABILITY STANDARDS DEVELOPMENT PLAN**

**2020–2022**

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# Reliability Standards Development Plan

2020-2022

November 5, 2019

RELIABILITY | RESILIENCE | SECURITY



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## Background

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As described herein, the 2020–2022 Reliability Standards Development Plan (RSDP) builds upon the goals of the previous RSDPs with an additional objective of implementing changes based on the Standards Efficiency Review (SER) efforts that began in 2018.

Pursuant to Section 310 of the NERC Rules of Procedure, NERC is required to develop and provide to applicable governmental authorities an annual RSDP for Reliability Standards development. Each annual RSDP must include a progress report comparing results achieved to the prior year’s RSDP. NERC is required to consider the comments and priorities of the applicable governmental authorities in developing and updating the annual RSDP. NERC also provides the RSDP to the NERC Standards Committee (SC) for review and posts the RSDP for industry comment.

## Executive Summary

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This 2020–2022 RSDP provides insight into standards development activities anticipated at the time of publication, so that stakeholders may make available resources needed to accomplish the standards development objectives. Additional activities such as Requests for Interpretation and Regional Variance development may impact the plan, but are not included at this time. In order to help the industry understand resource requirements for each project, the RSDP now shows time frames and anticipated resources for each project under development.

The 2020–2022 RSDP recognizes the diligent work over the last few years in transforming the body of NERC Reliability Standards into a mature state while shifting the focus of the standards program to Periodic Reviews, Federal Energy Regulatory Commission (FERC) directives, emerging risks, Standards Authorization Requests (SARs), and the SER. The 2020–2022 RSDP also contemplates that the work of the various NERC technical committees and working groups thereunder, may result in one or more SARs and subsequent standards projects. The 2020–2022 RSDP also includes plans for completing the Periodic Reviews initiated in prior years.

Periodic Reviews and initiatives, such as the next steps of Phase 2 of the SER project, also enable NERC to identify requirements that do little to promote reliability, and should therefore be retired. As with the 2019–2021 RSDP, Periodic Reviews will occur at a measured pace compared to the level of activity and pace of standards development during recent years. Additionally, Periodic Reviews will be aligned with the strategic consideration of reviewing standard families that are interrelated.<sup>1</sup> Also, the Standards Grading that was paused due to the SER project will resume in 2020.

While most of the work in the next three years will focus on Periodic Reviews, SER implementation, and Standards Grading, there may be new or emerging risks identified that could generate new standards development projects. NERC will continue to seek input and recommendations from the Reliability Issues Steering Committee (RISC) with regard to emerging or potential risks to Bulk Electric System (BES) reliability that may require revisions to existing standards or new standards development.

To help determine impact of potential risk to BES reliability, NERC will use a variety of feedback mechanisms, including but not limited to, the Compliance Monitoring and Enforcement Program, RISC profiles, Events Analysis, and Compliance violation statistics, as well as any published “Lessons Learned.” The Regional Entities also have feedback mechanisms in place to solicit comments from industry and to help identify approaches to meet concerns and provide input to the standards. Input into standards will also continue to be coordinated with the North American Energy Standards Board as appropriate. In assessing feedback to create new or revised standards, NERC will focus on risk, reliability or security data, and enforcement information to determine whether a standard revision is the best tool to initially address the reliability risk.

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<sup>1</sup> The Periodic Review standing review team grades the standards prior to conducting Periodic Reviews. The team includes representatives from NERC, the Regional Entities, and NERC technical committees. If the standard is revised through the standard development process in response to a Periodic Review recommendation(s), the Periodic Review standing review team will re-grade the standard with the revised language.



# 2019 Progress Report

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Pursuant to Section 310 of the NERC Rules of Procedure, NERC offers the following progress report on Reliability Standards development in 2018.

## FERC Directives

As of August 31, 2019, there are 12 outstanding FERC directives, 6 of which are related to standards and being resolved through the standards development process. The status of the Standards directives are reported quarterly to the NERC Board of Trustees (Board).

## Projects Completed in 2019

All of the projects from the previous RSDP are complete or expected to be complete this year, except the following which will continue into 2020:

1. Project 2015-09 [Establish and Communicate System Operating Limits](#),
2. Project 2016-02 [Modifications to CIP Standards](#),
3. Project 2017-01 [Modifications to BAL-003-1.1](#) (phase 2),
4. Project 2017-07 [Standards Alignment with Registration](#),
5. Project 2017-03 [FAC-008-3 Periodic Review](#),<sup>2</sup>
6. Project 2017-04 [Periodic Review of Interchange Scheduling and Coordination Standards](#), and
7. Project 2017-05 [NUC-001-3 Periodic Review](#).

Additional project information is available on the NERC website on the Standards web page.<sup>3</sup> Also, the SER completed an initial assessment of the entire body of standards in 2018 prior to initiating the Standards development process to consider any changes to the body of Reliability Standards in 2019. The next phase of the SER is set to continue into 2020.

**The following projects have been or are planned to be completed in 2019** (actual and anticipated Board adoption dates are noted):

1. Project 2016-02 [Modifications to CIP Standards](#) (CIP-003 directive on malicious code) (adopted by the Board in May 2019)
2. Project 2018-01 [Canadian-specific Revisions to TPL-007-2](#) (adopted by the Board in February 2019)
3. Project 2018-02 [Modifications to CIP-008 Cyber Security Incident Reporting](#) (adopted by the Board in February 2019)
4. Project 2018-03 [Standards Efficiency Review Retirements](#) (adopted by the Board in May 2019)
5. Project 2017-01 [Modifications to BAL-003-1.1](#) (phase 1) ( adopted by the Board in November 2019)

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<sup>2</sup> Final recommendations will be brought to the Board in 2020 for any outstanding periodic reviews, but the periodic review teams did complete an initial assessment. However, the teams were paused to allow the SER project to complete initial retirements.

<sup>3</sup> As of the date of publication, the subject web page resides at <http://www.nerc.com/pa/Stand/Pages/default.aspx>.

# 2020 Projects

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## Projects Continuing into 2020

In determining high, medium, or low priority designations for projects as listed in this RSDP, the following factors were taken into consideration:

1. Outstanding regulatory directives with filing deadlines (High Priority)
2. RISC category rankings of high impact with consideration of probability of occurrence (High or Medium Priority)
3. Potential reliability risks from stakeholders provided through feedback mechanisms (High, Medium, or Low Priority, based on the risk)
4. Outstanding regulatory directives without regulatory deadlines or “soft directives” such as considerations (High or Medium Priority)
5. Outstanding requirements that are known candidates for retirement (Medium or Low Priority)
6. Any known adverse content and quality assessments (likely Low Priority, as any reliability gaps identified have already been addressed)

### High Priority

- Project 2016-02 Modifications to CIP Standards (virtualization) (drafting estimated to be completed by November 2020 requiring approximately 11 industry subject matter experts for approximately 120 work hours each for the remaining part of this project)
- Project 2015-09 Establish and Communicate System Operating Limits - FAC-010, FAC-011, FAC-014 (drafting estimated to be completed by May 2020 requiring approximately 10 industry subject matter experts for approximately 50 work hours each for the remaining part of this project)
- Project 2018-04 Modifications to PRC-024-2 (drafting estimated to be completed by February 2020 requiring approximately 10 industry subject matter experts for approximately 50 work hours each for the remaining part of this project)
- Project 2019-01 Modifications to TPL-007-3 (drafting estimated to be completed by May 2020 requiring approximately nine subject matter experts for approximately 70 work hours each for this project)
- Project 2019-03 Cyber Security Supply Chain Risks (drafting estimated to be completed by December 2020 requiring approximately nine subject matter experts for approximately 90 work hours each for this project)
- Project 2019-06 Cold Weather Preparedness (drafting estimated to be completed by December 2020 requiring approximately nine subject matter experts for approximately 90 work hours each for this project)

### Medium Priority

- Project 2017-01 Modifications to BAL-003-1.1 (phase 2) (drafting estimated to be completed by November 2020 requiring approximately ten subject matter experts for approximately 40 work hours each for this project)
- Project 2019-02 BES Cyber System Information Access Management (drafting estimated to be completed by August 2020 requiring approximately ten subject matter experts for approximately 40 work hours each for this project)
- Project 2019-05 Modifications to PER-003-2 (drafting estimated to be completed by August 2020 requiring approximately eight subject matter experts for approximately 40 work hours each for this project)

### **Low Priority**

- Project 2019-04 Modifications to PRC-005-6 (drafting estimated to be completed by August 2020 requiring approximately eight subject matter experts for approximately 40 work hours each for this project)

## Other Projects Continuing into 2020

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### **NERC Reliability Standards Efficiency Review Continuation**

In 2018, NERC began using both internal ERO Enterprise resources and industry resources to evaluate candidates for potential Reliability Standard retirements. NERC solicited industry participants to evaluate possible candidate requirements that may no longer be necessary to support reliability or address current risks to the Bulk Power System (BPS). Through open and transparent industry participation, the SER teams submitted a SAR to the SC in order to implement recommended changes to the body of Reliability Standards. The SAR was accepted at the August 2018 SC meeting, and the effort retired numerous standards. The next phase of the SER project will determine if there are additional requirements that could be retired by making small modifications to the standard. The next phase will also review the CIP family of standards.

NERC will continue to coordinate with the industry team to ensure all of the information developed through previous Standards Grading efforts, which includes consideration of content, quality, cost, and reliability impact analysis, align with the SER projects. Thus, some projects such as the Standards Alignment with Registration and periodic reviews may have some natural synergies that allow for other projects to be combined with the SER initiative.

### **Other Projects**

Currently, no Reliability Standards are due for periodic review in 2020, but any outstanding or paused Periodic Review projects will be completed. The Periodic Reviews will coordinate timing with the next phase of the SER project to ensure the initiatives work together to review the standards that may need to be modified. Additionally, SARs, emerging risks to the BPS, and FERC regulatory directives that may occur subsequent to publishing this RSDP may prompt additional projects. Additionally, all new projects will continue to attempt to transition the current Guidelines and Technical Basis to a separate Technical Rationale documents when applicable. Finally, as noted above, the Standards Grading effort will resume in 2020 and will be attached in the corresponding RSDP.