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**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

**North American Electric Reliability  
Corporation**                    )

**Docket Nos. RM05-17-000  
RM05-25-000  
RM06-16-000**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION  
INFORMATIONAL FILING OF RELIABILITY STANDARDS DEVELOPMENT PLAN  
2021–2023**

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December 8, 2020

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**Attachment A**      *Reliability Standards Development Plan: 2021–2023*

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**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION  
INFORMATIONAL FILING OF RELIABILITY STANDARDS DEVELOPMENT PLAN  
2021–2023**

The North American Electric Reliability Corporation (“NERC”) hereby submits its 2021–2023 Reliability Standards Development Plan (“2021 Development Plan”) in accordance with Section 310 of the NERC Rules of Procedure.<sup>1</sup> The 2021 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 2021 Development Plan on November 5, 2020. NERC submits this filing and the attached 2021 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*, to the Federal Energy Regulatory Commission (“FERC” or “Commission”) in 2006. NERC has since updated the plan annually, and the 2021–2023 version of the plan is presented in this filing. Consistent with previous versions, the 2021 Development Plan is filed for informational purposes and no specific Commission action is requested at this time.

The 2021 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 2021 Development Plan. As detailed in Section III, NERC submits this filing to summarize the 2021 Development

Plan and inform the Commission and other interested parties of projects noted in the 2020 Development Plan that will continue into 2021.

### **III. 2021 DEVELOPMENT PLAN**

#### **A. Summary of the 2021 Development Plan**

The 2021 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 2021 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 2021 may require flexibility in planning to ensure that activities are given appropriate resources and priority.

The 2021 Development Plan builds upon the work of previous years in transforming the body of NERC Reliability Standards into a mature state. The 2021 Development Plan continues that work by maintaining the focus of the standards program to Periodic Reviews, addressing FERC directives, emerging risks, Standards Authorization Requests, and the Standards Efficiency Review (“SER”) project. The Standards Grading that was paused due to the SER project will continue to be paused until 2021 to allow industry to focus on business continuity efforts in light of the recent COVID-19 pandemic.

Periodic Reviews and initiatives, such as any further phases of the Standards Efficiency Review, enable NERC to identify requirements that do little to promote reliability, and should therefore be retired. As with the 2020 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 new Standards Authorization Requests, Periodic Reviews, and SER implementation, projects to develop new or revised Reliability Standards may be initiated in response to Commission 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.

## **B. 2020 Progress Report**

The 2020 Development Plan identified standard development projects that would be initiated in 2020 or continue from 2019. 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>

### 1. Projects Completed in 2020

Several projects (or portions of projects) identified in the 2020 Development Plan were completed in 2020. These projects, along with when the associated standard(s), were adopted by the NERC Board of Trustees and are identified below:

- Project 2016-02 Modifications to CIP Standards (modifications to CIP-002 to address Transmission Owner Control Centers) (adopted by the NERC Board in May 2020);

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

- Project 2017-07 Standards Alignment with Registration (adopted by the NERC Board in February 2020);<sup>3</sup>
- Project 2018-04 Modifications to PRC-024-2 (adopted by the NERC Board in February 2020);
- Project 2019-01 Modifications to TPL-007-3 (adopted by the NERC Board in February 2020); and
- Project 2019-03 Cyber Security Supply Chain Risks (adopted by the NERC Board in November 2020).

Several periodic review projects identified in the 2020 Development Plan were concluded:

- 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.

Additionally, in 2020 NERC continued work under phase two of the Standards Efficiency Review. Work on this initiative is set to continue into 2021.

## 2. Projects Continuing in 2021

The following standard development projects identified in the 2020 Development Plan will continue into 2021:

- Project 2016-02 Modifications to CIP Standards (virtualization);
- Project 2017-01 Modifications to BAL-003-1.1 (phase 2);
- Project 2019-04 Modifications to PRC-005-6;
- Project 2019-06 Cold Weather;
- Project 2015-09 Establish and Communicate System Operating Limits; and
- Project 2019-02 BES Cyber System Information Access Management.

Additionally, the following projects, which began in 2020, will continue into 2021:

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<sup>3</sup> Identified in the 2019 Development Plan.

- Project 2020-01 Modifications to MOD-032-1;
- Project 2020-02 Transmission-connected Dynamic Reactive Resources;
- Project 2020-03 Supply Chain Low Impact Revisions;
- Project 2020-04 Modifications to CIP-012;
- Project 2020-05 Modifications to FAC-001 and FAC-002; and
- Project 2020-06 Modifications to MOD-026 and MOD-027.

Each of these projects is identified and prioritized in the 2021 Development Plan, as described in the following section.

Project 2019-05 Modifications to PER-003-2, which was identified in the 2020 Development Plan, is currently on hold pending further action from the Personnel Certification and Governance Committee.

### **C. Prioritization of 2021 Projects**

Each new or continuing Reliability Standard Project identified in the 2021 Development Plan has been 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 2021 Development Plan and their assigned priority category are provided below.



### **High Priority**

- Project 2019-06 Cold Weather;
- Project 2020-04 Modifications to CIP-012; and
- Project 2020-03 Supply Chain Low Impact Revisions.

### **Medium Priority**

- Project 2015-09 Establish and Communicate System Operating Limits;
- Project 2016-02 Modifications to CIP Standards (virtualization);
- Project 2017-01 Modifications to the BAL-003-1.1 (phase 2);
- Project 2019-02 BES Cyber System Information Access Management;
- Project 2020-05 Modifications to FAC-001 and FAC-002; and
- Project 2020-06 Modifications to MOD-026 and MOD-027.

### **Low Priority**

- Project 2019-04 Modifications to PRC-005-6;
- Project 2020-01 Modifications to MOD-032-1; and
- Project 2020-02 Transmission-connected Dynamic Reactive Resources.

As in prior years, work will continue under the NERC Standards Efficiency Review in 2021. NERC is presently reviewing a Standards Authorization Request for the Simplification of Data Exchange Requirements. Additionally, the CIP Standards Efficiency Review has reviewed the body of CIP Reliability Standards and will continue its work into 2021. 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 Standards Efficiency Review projects.

Currently, no Reliability Standards are due for periodic review in 2021. As in past years, NERC will coordinate the timing of Periodic Reviews with subsequent phases of the Standards

Efficiency Review 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 2021.

Other projects may be initiated in 2021 based on new Standard Authorization Requests, including those being developed by the Reliability and Security Technical Committee, emerging risks to the Bulk-Power System, or new regulatory directives.

#### **IV. CONCLUSION**

As discussed above, the 2021 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 2021 Development Plan for informational purposes only.

Respectfully submitted,

*/s/ Lauren A. Perotti*

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Date: December 8, 2020

**CERTIFICATE OF SERVICE**

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding. Dated at Washington, D.C. this 8th day of December, 2020.

*/s/ Lauren A. Perotti*

Lauren A. Perotti  
*Counsel for the North American Electric  
Reliability Corporation*

**ATTACHMENT A**

**RELIABILITY STANDARDS DEVELOPMENT PLAN**

**2021–2023**

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# Reliability Standards Development Plan

2021-2023

November 5, 2020

RELIABILITY | RESILIENCE | SECURITY



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## Background

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As described herein, this Reliability Standards Development Plan (RSDP) builds upon the goals of the previous RSDPs. 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 2021-2023 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.

This 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, Standard Authorization Requests (SARs), and the Standards Efficiency Review (SER). This RSDP also contemplates that the work of the Reliability and Security Technical Committee (RSTC) and working groups thereunder may result in more SARs and subsequent standards projects.

Periodic Reviews and initiatives such as any further SER phases, also enable NERC to identify requirements that do little to promote reliability, and should therefore be retired. 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 efforts for 2020 will pause until 2021 to allow industry to focus on business continuity efforts in light of the recent Covid-19 pandemic.

While most of the work in the next three years will focus on new SARs, 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 RSTC. 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.



# 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.

## FERC Directives

As of June 30, 2020, there are four<sup>2</sup> outstanding directives being resolved through the standards development process. The status of the Standards directives are reported quarterly to the NERC Board of Trustees (Board).

## Continuing Projects

One project, Project 2019-05 [Modifications to PER-003-2](#), that commenced in 2019 is currently on hold pending further action from the Personnel Certification and Governance Committee (PCGC). All of the other projects from the previous RSDP are complete or expected to be complete this year, except the following, which will continue into 2021:

1. Project 2016-02 [Modifications to CIP Standards](#) (virtualization)
2. Project 2017-01 [Modifications to BAL-003-1.1](#) (phase 2)
3. Project 2019-04 [Modifications to PRC-005-6](#)
4. Project 2019-06 [Cold Weather](#)
5. Project 2020-01 [Modifications to MOD-032-1](#)
6. Project 2020-02 [Transmission-connected Dynamic Reactive Resources](#)
7. Project 2020-03 [Supply Chain Low Impact Revisions](#)
8. Project 2020-04 [Modifications to CIP-012](#)

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 first phase of Standards retirements for SER have been completed, and any future development will continue into 2021.

**The following projects have been or are planned to be completed in 2020** (actual and anticipated Board adoption dates are noted):

1. Project 2017-07 Standards Alignment with Registration (adopted by the NERC Board in February 2020)
2. Project 2018-04 Modifications to PRC-024-2 (adopted by the NERC Board in February 2020)
3. Project 2019-01 Modifications to TPL-007-3 (adopted by the NERC Board in February 2020)
4. Project 2016-02 Modifications to CIP Standards (modifications to CIP-002 to address Transmission Owner Control Centers adopted by the NERC Board in May 2020)
5. Project 2015-09 Establish and Communicate System Operating Limits (projected to be adopted November 2020)

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<sup>2</sup> The following projects are currently modifying standards to address directives: 1) Project 2015-09 Establish and Communicate System Operating Limits (communication of IROLs); 2) Project 2019-03 Cyber Security Supply Chain Risks (inclusion of EACMs in Supply Chain Reliability Standards); and 3) 2020-04 Modifications to CIP-012 (requirement for protections regarding the availability of communication links and data communicated between bulk electric system Control Centers). The fourth directive is a requirement to submit project schedules for two ongoing CIP projects.

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

6. Project 2019-02 BES Cyber System Information Access Management (projected to be adopted November 2020)
7. Project 2019-03 Cyber Security Supply Chain Risks (projected to be adopted November 2020)

# 2021 Projects

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## Projects Continuing into 2021

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 2019-06 [Cold Weather](#) (drafting estimated to be completed by December 2021 requiring approximately 10 industry subject matter experts for approximately 120 work hours each for the remaining part of this project)
- Project 2020-04 [Modifications to CIP-012](#) (drafting estimated to be completed by August 2021 requiring approximately 10 industry subject matter experts for approximately 100 work hours each for the remaining part of this project)
- Project 2020-03 [Supply Chain Low Impact Revisions](#) (drafting estimated to be completed by December 2021 requiring approximately 10 industry subject matter experts for approximately 120 work hours each for the remaining part of this project)

### Medium Priority

- Project 2016-02 [Modifications to CIP Standards](#) (virtualization) (drafting estimated to be completed by December 2021 requiring approximately 11 industry subject matter experts for approximately 120 work hours each for the remaining part of this project)
- Project 2017-01 [Modifications to BAL-003-1.1](#) (phase 2) (drafting estimated to be completed by August 2021 requiring approximately ten subject matter experts for approximately 40 work hours each for this project)
- Project 2020-05 [Modifications to FAC-001 and FAC-002](#) for material modifications to Facilities (drafting estimated to be completed by May 2021) requiring approximately ten subject matter experts for approximately 40 work hours each for this project)
- Project 2020-06 Modifications to MOD-026 and MOD-027 for inverter-based resources (drafting estimated to be completed by May 2021) requiring approximately ten 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 2021 requiring approximately eight subject matter experts for approximately 40 work hours each for this project)
- Project 2020-01 [Modifications to MOD-032-1](#) (drafting estimated to be completed by November 2021 requiring approximately 12 subject matter experts for approximately 40 work hours each for this project)
- Project 2020-02 [Transmission-connected Dynamic Reactive Resources](#) (drafting estimated to be completed by May 2022 requiring approximately 10 subject matter experts for approximately 40 work hours each for this project)<sup>4</sup>

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<sup>4</sup> Another SAR related to this project is expected to be submitted to the Standards Committee later in 2020; therefore, the scope of this project is expected to change. The timeline for seating this drafting team and commencing work will be coordinated with the anticipated SAR.

## Other Projects Continuing into 2021

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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 Project 2018-03 drafting team undertook the endeavor to revise a number of Reliability Standards for the suggested recommended retirements.

For Phase 2 of the SER project, the working team submitted a Standards Authorization Request to NERC for the Simplification of Data Exchange Requirements. NERC is currently reviewing the SAR, and will recommend next steps later in 2020. Additionally, the CIP SER has reviewed industry comments of recommended retirements and the team will continue its work into 2021.

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.

### **Other Projects Commencing**

Currently, no Reliability Standards are due for periodic review in 2020. The Periodic Reviews will coordinate timing with any subsequent phases 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 through 2020. Several projects are anticipated based on SARs being developed at the RSTC. Finally, as noted above, the Standards Grading effort will resume in 2021 and will be attached in the corresponding RSDP.