

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

DRAFT Reliability Standards Development Plan

2016–2018

July 15, 2015

RELIABILITY | ACCOUNTABILITY



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Background

The 2015–2017 Reliability Standards Development Plan (RSDP) outlined a method for NERC Reliability Standards to reach “steady state,”¹ addressing the remaining FERC directives and recommendations to retire requirements. The number of active projects in the plan was less than in prior RSDPs, and it was projected that the number of projects would remain at the 2015 level in future years. The 2015–2017 RSDP indicates that, after Reliability Standards reach steady state in 2016, projects in future years would consist of standards being assessed for quality, content, or alignment with other standards through enhanced periodic reviews (EPRs), projects addressing FERC directives, or newly identified risks to the Bulk Power System (BPS).

The Members Representative Committee (MRC) and the NERC Board of Trustees (Board) sought industry input prior to the May 2015 meetings regarding the future of standards development. In light of the approaching milestone of steady-state standards maturity, the Board asked whether the NERC Reliability Standards should be considered stabilized or if there is value in making additional significant enhancements. If considered stabilized at steady state, only incremental refinements would be made to the standards to address FERC directives or newly identified risks to the BPS.

Pursuant to the NERC Rules of Procedure, Section 310, “NERC shall develop and provide an annual Reliability Standards Development Plan for development of Reliability Standards to the applicable governmental authorities. NERC shall consider the comments and priorities of the applicable governmental authorities in developing and updating the annual Reliability Standards Development Plan. Each annual Reliability Standards Development Plan shall include a progress report comparing results achieved to the prior year’s Reliability Standards Development Plan.” NERC also includes the Standards Committee review during development of the RSDP and posts the RSDP for industry comment.

¹For the purposes of that plan, “steady state” means a stable set of clear, concise, high-quality, and technically sound Reliability Standards that are results based, including retirement of requirements that do little to promote reliability.

Executive Summary

This 2016–2018 RSDP sets forth a plan that involves conducting the enhanced periodic reviews as well as accomplishing other envisioned tasks by addressing: 1) emerging risks, 2) FERC directives, and 3) Standards Authorization Requests (SARs). This plan specifically includes the Integration of Variable Generation Task Force (IVGTF) recommendations, the Essential Reliability Services Task Force (ERSTF) recommendations, communication with the Reliability Issues Steering Committee (RISC) on other emerging risks, potential FERC directives, and input from industry on the feedback loops explained in detail later in this plan.

Based on the policy input and the discussion at the Board, it appeared there was general support to conduct the 2016–2018 EPRs at a measured pace.² It also appeared there was general support for a set goal of completing a certain number of reviews each year with the understanding that the reviews should be aligned with strategic considerations of reviewing standard families³ that are interrelated. There was also support for the EPRs to start with a period of study and data evaluation of three to six months to inform the reviews. Accompanying the measured approach to review the quality and content of standards through the EPR process, the Board requested that the Standards Committee and NERC staff develop a standards metric. Although the standards metric is not explicitly included in the 2016–2018 RSDP, it will be referenced after it is approved by the Board in the filing to the applicable governmental authorities by the end of the year.

It is important to note that while most of the work in the next three years will focus on EPRs, there may be new or emerging risks identified that would generate full standards development work. NERC and the Standards Committee will continue to seek input and recommendations from the Reliability Issues Steering Committee (RISC) with regard to potential risks to reliability that may be addressed through the revision of existing standards or the development of new standards.

This plan is meant to provide a perspective of the standards development work to be undertaken at time of publication to appropriate the necessary resources to accomplish the standards development objectives.

² The Standards Committee approved an enhanced periodic review template on September 30, 2014. This was presented to the Board on November 12, 2014, as part of the Standard Committee's update. The template includes background information and questions to guide a comprehensive review of the standard(s) by the review team, and it serves as documentation of the review team's considerations and recommendations.

³ In some cases, the one-off review of a standard will likely be appropriate. For example, there are not necessarily other interrelated standards with FAC-003.

Steady State

PLEASE NOTE: This section will be updated, using similar charts and numbers as the 2015–2017 RSDP at a later time.

2015 Progress Report

The 2015–2017 RSDP identified 16 projects that initiate in 2015 or continue from 2014. All or the projects listed below have been completed or are planned to be completed except Project 2009-02: Real-time Reliability Monitoring and Analysis Capabilities, and Project 2010-05.3: Phase 3 of Protection Systems: Remedial Action Schemes (RAS), which are both listed under “Projects continuing from 2015 into 2016.”

The following projects were completed in 2015:

Projects from the 2015–2017 RSDP

1. Project 2007-06: System Protection Coordination (PRC-027-1)
2. Project 2007-06.2: System Protection Coordination (PRC-001)
3. Project 2008-02.2: Phase 2 – Undervoltage Load Shedding (UVLS): Misoperations (PRC-004 and PRC-010)
4. Project 2010-14.1: Phase 1 – Balancing Authority Reliability-based Controls: Reserves (BAL-002)
5. Project 2010-14.2: Phase 2 – Balancing Authority Reliability-based Controls (BAL-004, BAL-005, BAL-006)
 - a. Project 2010-14.2.1: Phase 2 – Balancing Authority Reliability-based Controls (BAL-005 and BAL-006)
 - b. Project 2010-14.2.2: Phase 2 – Balancing Authority Reliability-based Controls (BAL-004)
6. Project 2014-02: Critical Infrastructure Protection (CIP-003-6, CIP-004-6, CIP-007-6, CIP-010-2, CIP-011-2)
7. Project 2014-03: Transmission Operations (TOP-001-3)
8. Project 2015-02: Periodic Review of EOP Standards (EOP-004, EOP-005, EOP-006, and EOP-008)
9. Project 2014-01: Standards Applicability for Dispersed Generation Resources (medium-priority standards)
10. Project 2014-04: Physical Security Directives⁴
11. Project 2015-03: Periodic Review of System Operating Limit Standards (FAC-010, FAC-011, and FAC-014)
12. Project 2015-04: Alignment of NERC Glossary of Terms used in NERC Reliability Standards and the Definitions Used in the Rules of Procedure
13. Project 2015-06: Interconnection Reliability Operations and Coordination⁵
14. Project 2015-XX: Implementation of FAC System Operating Limit Standards Periodic Review

⁴ This project was continued to address a directive from a FERC Order. Because the timing was relatively short between filing and approval of the standard, the same standard drafting team was kept in place and the original SAR was revised.

⁵ This project was put on hold until Project 2014-03 (TOP/IRO Revisions) was filed with the applicable governmental authorities. This project began in Q2 of 2015.

Additional Projects conducted to address a FERC directive

1. Project 2007-17.4: PRC-005 FERC Order No. 803 Directive⁶
2. Project 2010-04.1: MOD-031 FERC Order No. 804 Directive⁷

^{6,7} This project was continued to address a directive that came out from a FERC order. Because the timing was relatively short between filing and approval of the standard, the same standard drafting team was kept in place and the original SAR was revised.

2016 Projects

Projects Continuing from 2015 into 2016

The following projects are planned to continue from 2015 along with any 2015 projects that are planned to be completed in that year but need additional time. These projects will be prioritized when presented to the Standards Committee.

- Project 2009-02: Real-time Reliability Monitoring and Analysis Capabilities (Target: February 2016 Board)
- Project 2010-05.3: Phase 3 of Protection Systems – Remedial Action Schemes (RAS) (Target: February 2016 Board)
- Project 2015-07: Internal Communications Capabilities FERC Order No. 808 Directive
- Project 2015-08: FAC-003 (responding to a FERC directive)
- Project 2015-XX: Emergency Operations
- Project 2015-XX: System Operating Limits⁸

Projects to be Initiated in 2016

The following projects are expected to be initiated in 2016. Not all projects have SARs. The missing SARs will be developed and presented to the Standards Committee prior to beginning them.

- Project 2016-01: TPL Directives
- Enhanced periodic reviews that recommend revisions to standards
- Emerging risks, if any (with input from the RISC on whether a standard is needed)
- Potential modifications to existing standards

Project 2016-01: TPL Directives

This project will address two directives and consider other improvements to TPL-001-4 — Transmission System Planning Performance Requirements. There are no remaining time-sensitive directives.

From FERC Order No. 786:

- Paragraph 40 – Directs NERC to modify Reliability Standard TPL-001-4 to address the concern that the six month threshold could exclude planned maintenance outages of significant facilities from future planning assessments.
- Paragraph 89 – Directs NERC to consider a similar spare equipment strategy for stability analysis upon the next review cycle of Reliability Standard TPL-001-4.

Enhanced Periodic Reviews

The following EPRs are planned for 2016–2017. Their scheduling and timing depends on the completion of the standard projects discussed above. The EPR teams will use the EPR template approved by the Standards Committee on September 30, 2014, or as subsequently revised and approved by the Standards Committee.

⁸ At the time this draft RSDP was issued for industry comment, the Emergency Operations and System Operating Limit Periodic Reviews (Projects 2015-02 and 2015-03) were expected to be presented to the Standards Committee in August or September. There is a possibility that these projects may begin formal development in 2015 and are therefore included in this section.

An initial set of possible EPR candidates is listed below. This initial set was developed by Standards Committee leadership and NERC staff.

- BAL and INT families (BAL-001 and INT-004, INT-006, INT-009, and INT-010)
- EOP-001, EOP-002, and EOP-003
- EOP-010 (as a one-off)
- FAC-003-3 (as a one-off)
- FAC-008-3 (as a one-off)
- NUC-001-3 (as a one-off)
- PER-001, PER-003, and PER-004
- PRC families
- VAR-001 and VAR-002

Enhanced Periodic Review Guidelines⁹

Many factors must be considered in developing the plan to conduct EPRs. As the reviews provide a wider view of the standards to determine whether a particular group of standards is effective, the first determination is how to group standards for review. For example, it may be reasonable to review standards by looking at the entire standards family, but it may also make sense to look at reliability actions that cut across standards or by sections of standards that relate to each other.¹⁰

The next determination is whether the group of standards is eligible for an update. Eligibility may be affected by additional projects that may be conducted. Once the eligibility determinations have been made for groups of standards, a prioritization must be determined.

Standards Eligibility

The criteria below are used to assist in the determination of eligibility to conduct the Enhanced Periodic Reviews for standards for 2016, 2017, and 2018.

Criteria for What Makes a Standard Eligible:

- All requirements of a Reliability Standard have been in effect, based on the implementation/compliance dates approved by the applicable governmental authority, for at least a year. In some instances, a standard may be eligible if it has been a year since the effective date of the order¹¹ approving that standard if entities are “early adopting” the requirements as they implement their programs to prepare for the effective date. Examples of standards that meet this criterion for the 2016 EPRs are:
 - FAC-003-3: This standard was effective 7/1/2014 and has no future standards development planned.
 - NUC-001-3 and NUC-001-2.1: These standards were effective 4/1/2013, and the changes to NUC-001-3 were not significant (e.g., they were related to capitalization of terms, deleting unneeded terms).

⁹Per Section 13 of the Standard Processes Manual, all Reliability Standards shall be reviewed at least once every ten years from the effective date of the Reliability Standard or the date of the latest Board of Trustees adoption to a revision of the Reliability Standard, whichever is later. If a Reliability Standard is approved by the American National Standards Institute (ANSI) as an American national standard, it shall be reviewed at least once every five years from the effective date of the Reliability Standard or the date of the latest Board of Trustees adoption to a revision of the Reliability Standard, whichever is later.

The Reliability Standards Development Plan shall include projects that address this five- or ten-year review of Reliability Standards.

- If a Reliability Standard is nearing its five- or ten-year review and has issues that need resolution, then the Reliability Standards Development Plan shall include a project for the complete review and associated revision of that Reliability Standard that includes addressing all outstanding governmental directives, all approved Interpretations, and all unresolved issues identified by stakeholders.
- If a Reliability Standard is nearing its five- or ten-year review and there are no outstanding governmental directives, Interpretations, or unresolved stakeholder issues associated with that Reliability Standard, then the Reliability Standards Development Plan shall include a project solely for the “five-year review” of that Reliability Standard.

While the main work in the next three years will be the continuation of research and conducting of the enhanced Periodic Reviews with consideration of the topics discussed below, there may be risks identified for which projects may need to be initiated.

¹⁰ The Independent Experts Review Panel developed one approach to grouping standards.

¹¹ “Effective date” and “issue date” are different, so this must be considered.

- Compliance expectations are not clear or the standard is not being consistently monitored.
- Feedback loops indicate risk (e.g., Event Analysis lessons learned).
- Outstanding Paragraph 81 requirements that may not have been addressed.
- The implementation of the *Standards Independent Experts Review Project - Final Report* recommendations.¹²
- Per the Standard Processes Manual (SPM), standards will go through a review at least every 10 years for non-ANSI-approved standards and every five years for ANSI-approved standards.

Criteria for What Makes a Standard Not Eligible:

- A standard that is currently in standards development or is scheduled to undergo standards development that will likely result in a significant revisions of the standard currently in effect.
 - Standards development here includes the standard:
 - in a standards development project;
 - being adopted by the NERC Board of Trustees;
 - pending regulatory filing;
 - being filed with regulatory agencies; or
 - approved by regulatory agencies but not yet in effect.

Prioritization

Specific elements considered in the prioritization of the EPRs include:

1. RISC category rankings
2. Feedback on risk
3. Outstanding regulatory directives
4. Outstanding regulatory directives with deadlines
5. Outstanding requirements that are candidates for retirement
6. *Standards Independent Experts Review Panel - Final Report* content and quality assessments

Feedback Loops (Factors for Consideration of Risk)

The following feedback loops, or factors for consideration, will assist in keeping the workload by prioritizing (a) the projects not having a one-year deadline, and (b) compliance input built earlier into the project's timeline.

Emerging Risks and Changing Technologies

The RISC, IVGTF, and ERSTF are three important committees or task forces focusing on emerging risks and changing technologies. They will need to be involved during the beginning of 2016 to assist in the EPR for prioritization and technical expertise.

Event Analysis and Compliance Violation Statistics

Event analysis and compliance violation statistics should be reviewed as the EPRs get underway. Lessons learned and statistics from analyzing events will allow teams to review existing requirements to see if there is any correlation between the events and requirements. Violations statistics allow teams to investigate requirements

¹² The Standards Independent Experts Review Panel final report recommendations can be found here: http://www.nerc.com/pa/Stand/Standards%20Development%20Plan%20Library/Standards_Independent_Experts_Review_Project_Report.pdf

that are highly violated to identify areas where language may have been misinterpreted and provide training to the industry on the intent of the requirements.

Lessons Learned and Frequently Asked Questions

Lessons learned documents are designed to convey information from NERC's various implementation activities. They are not intended to establish new requirements under NERC's Reliability Standards, to modify the requirements in any existing Reliability Standards, or to provide an Interpretation under Section 7 of the SPM. Additionally, there may be other legitimate ways to fulfill the obligations of the requirements that are not expressed in these supporting documents. Compliance will continue to be determined based on language in the NERC Reliability Standards as they may be amended from time to time. Implementation of a lesson learned is not a substitute for compliance with requirements in NERC's Reliability Standards.

Frequently asked questions (FAQs) provide transparency in providing answers to questions asked by entities. The information presented in FAQ documents is intended to provide guidance and is not intended to establish new requirements under NERC's Reliability Standards or to modify the requirements in any existing Reliability Standards.

A standard being the subject of numerous lessons learned or FAQs is an indication that the language in the standard may be ambiguous, interpreted in multiple ways, or does not appropriately capture the risk to reliability.

Measures

There have been more requests for guidance to industry on what is expected for measuring performance on standard requirements. This shows that the measures within some standards are not informative enough. The EPRs should include consideration of requests for guidance from industry, and the efforts should have an emphasis on improving measures such that guidance documents or detailed Reliability Standard Audit Worksheets (RSAWs) are not needed and the measures are sufficient guidance to industry.

Request for Interpretations

Similar to lessons learned and FAQs, a standard receiving a valid interpretation request may indicate problems with the language of a requirement.

RSAW Development and Compliance Input

In the beginning of 2013, NERC endeavored to develop RSAWs concurrently with standards. The purpose was to post RSAWs within 15 days of a standard being posted to allow industry to consider the compliance approach from auditors as they vote on the standard(s) being balloted.

Regional Variances

If a Regional standard is in effect, or is under consideration for a development project, it should be wrapped into continent-wide reliability standards as a Regional variance, provided that there is a continent-wide standard that addresses the same subject.

Construct of Standards

The Independent Experts Review Panel recommendations on a new construct of standards will need to be researched with industry to establish the benefit of realigning the standards. For example, the Total Transfer Capability standards (proposed MOD-001-2) and some of the FAC standards have some overlap. If there is consensus in the industry, a discussion about the standards alignment and where requirements could best reside can take place as part of the EPR discussion.

Surveys and Polls

Surveys and polls could be good outreach tools as the feedback loops are implemented in the beginning of 2016. Questions for the industry, or thoughts on conducting the EPRs, could be an efficient way to collect stakeholders'

opinions. Since standards development is on a more measurable approach and not on a track to accomplish “X amount of projects a year,” this will be important feedback to ensure industry resources are not strained and the prioritization of projects and EPRs addresses projects/people involved in high-risk areas.