

Agenda Standards Oversight and Technology Committee

May 6, 2015 | 8:00 a.m. – 9:00 a.m. Eastern

The Ritz-Carlton, Pentagon City
1250 S Hayes Street
Arlington, VA 22202

Call to Order

Introductions and Chair's Remarks

NERC Antitrust Compliance Guidelines—Public Announcement

Agenda Items

1. **Minutes* - Approve**
 - a. February 11, 2015 Meeting
2. **ERO Enterprise IT Application Strategy* - Update**
3. **FAC-003: Research and Development Results of Gap Factor Verification - Update**
4. **Future of Standards Development* - Discussion**
5. **Periodic Review of NERC ANSI Accreditation* - Review**
6. **Reliability Standards Quarterly Status Report (including Standards Committee Report)* - Information**
7. **Adjournment**

*Background materials included.

Antitrust Compliance Guidelines

I. General

It is NERC's policy and practice to obey the antitrust laws and to avoid all conduct that unreasonably restrains competition. This policy requires the avoidance of any conduct that violates, or that might appear to violate, the antitrust laws. Among other things, the antitrust laws forbid any agreement between or among competitors regarding prices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that unreasonably restrains competition.

It is the responsibility of every NERC participant and employee who may in any way affect NERC's compliance with the antitrust laws to carry out this commitment.

Antitrust laws are complex and subject to court interpretation that can vary over time and from one court to another. The purpose of these guidelines is to alert NERC participants and employees to potential antitrust problems and to set forth policies to be followed with respect to activities that may involve antitrust considerations. In some instances, the NERC policy contained in these guidelines is stricter than the applicable antitrust laws. Any NERC participant or employee who is uncertain about the legal ramifications of a particular course of conduct or who has doubts or concerns about whether NERC's antitrust compliance policy is implicated in any situation should consult NERC's General Counsel immediately.

II. Prohibited Activities

Participants in NERC activities (including those of its committees and subgroups) should refrain from the following when acting in their capacity as participants in NERC activities (e.g., at NERC meetings, conference calls and in informal discussions):

- Discussions involving pricing information, especially margin (profit) and internal cost information and participants' expectations as to their future prices or internal costs.
- Discussions of a participant's marketing strategies.
- Discussions regarding how customers and geographical areas are to be divided among competitors.
- Discussions concerning the exclusion of competitors from markets.
- Discussions concerning boycotting or group refusals to deal with competitors, vendors or suppliers.

- Any other matters that do not clearly fall within these guidelines should be reviewed with NERC's General Counsel before being discussed.

III. Activities That Are Permitted

From time to time decisions or actions of NERC (including those of its committees and subgroups) may have a negative impact on particular entities and thus in that sense adversely impact competition. Decisions and actions by NERC (including its committees and subgroups) should only be undertaken for the purpose of promoting and maintaining the reliability and adequacy of the bulk power system. If you do not have a legitimate purpose consistent with this objective for discussing a matter, please refrain from discussing the matter during NERC meetings and in other NERC-related communications.

You should also ensure that NERC procedures, including those set forth in NERC's Certificate of Incorporation, Bylaws, and Rules of Procedure are followed in conducting NERC business.

In addition, all discussions in NERC meetings and other NERC-related communications should be within the scope of the mandate for or assignment to the particular NERC committee or subgroup, as well as within the scope of the published agenda for the meeting.

No decisions should be made nor any actions taken in NERC activities for the purpose of giving an industry participant or group of participants a competitive advantage over other participants. In particular, decisions with respect to setting, revising, or assessing compliance with NERC reliability standards should not be influenced by anti-competitive motivations.

Subject to the foregoing restrictions, participants in NERC activities may discuss:

- Reliability matters relating to the bulk power system, including operation and planning matters such as establishing or revising reliability standards, special operating procedures, operating transfer capabilities, and plans for new facilities.
- Matters relating to the impact of reliability standards for the bulk power system on electricity markets, and the impact of electricity market operations on the reliability of the bulk power system.
- Proposed filings or other communications with state or federal regulatory authorities or other governmental entities.

Matters relating to the internal governance, management and operation of NERC, such as nominations for vacant committee positions, budgeting and assessments, and employment matters; and procedural matters such as planning and scheduling meetings.

Draft Minutes

Standards Oversight and Technology Committee

February 11, 2015 | 10:00 a.m. – 11:00 a.m. Pacific

The Westin San Diego
400 W. Broadway
San Diego, CA 92101

Mr. Kenneth G. Peterson, Chair, called to order a duly noticed meeting of the Standards Oversight and Technology Committee (the “Committee”) of the Board of Directors of the North American Electric Reliability Corporation (“NERC”) on February 11, 2015, at 10:00 a.m. Pacific, and a quorum was declared present. The agenda is attached as **Exhibit A**.

Present at the meeting were:

Committee Members:

Kenneth G. Peterson, Chair
Paul F. Barber
Frederick W. Gorbet
David Goulding
Douglas Jaeger
Bruce A. Scherr

Board of Trustee Members:

Janice B. Case
Gerald W. Cauley, President and Chief Executive Officer
Robert Clarke
Jan Schori
Roy Thilly

NERC Staff:

Valerie Agnew, Director of Standards
Charles A. Berardesco, Senior Vice President, General Counsel, and Corporate Secretary
Thomas Burgess, Vice President and Director of Reliability Assessment and Performance
Stan Hoptroff, Vice President and Chief Technology Officer
Mark G. Lauby, Senior Vice President and Chief Reliability Officer
Steven Noess, Director of Compliance Assurance
Janet Sena, Senior Vice President and Director Policy and External Affairs
Brady Walker, Associate Counsel
Michael Walker, Senior Vice President, Chief Financial and Administrative Officer, and Corporate Treasurer
Andrew Wills, Associate Counsel

Other:

Brian Murphy, Chair, Standards Committee

NERC Antitrust Compliance Guidelines

Mr. Peterson directed the participants’ attention to the NERC Antitrust Compliance Guidelines included with the agenda materials, and stated that any additional questions regarding these guidelines may be directed to Mr. Berardesco.

Minutes

Upon motion duly made and seconded, the Committee approved the minutes of the November 12, 2014 meeting as presented to the Committee at the meeting.

Standards Oversight and Technology Committee Self-Assessment Results

Mr. Peterson reviewed the Committee's Self-Assessment results for 2014, noting the results were positive overall, and that areas identified for improvement would be a focus in the coming year.

ERO Enterprise IT Application Strategy

Mr. Hoptroff provided an update on the ERO Enterprise IT Application Strategy. He reviewed the status of development and implementation of several programs, including the standards balloting application, the NERC Microsoft host platform, the reliability assessment data system, the events analysis application for the Microsoft host platform, the ES-ISAC portal, the CRISP program, and the CMEP tools.

Mr. Hoptroff noted that NERC plans to continue to monitor the development of new technologies as a way to improve business processes, and he said that NERC IT would continue to work with the ERO Enterprise Technology Leadership Team to determine necessary resources, taking into account current business processes and available financial resources.

Standards Committee Elections

Mr. Peterson noted the recent resignation of Scott Miller as Vice Chair of the Standards Committee and thanked Mr. Miller for his service. He reported that Fred Plett of the Massachusetts Attorney General's Office has been elected Vice Chair of the Standards Committee.

Reliability Standards Quarterly Status Report and Standards Committee Report

Mr. Murphy noted the progress that NERC is making towards achieving "steady state" Reliability Standards. He highlighted the work of the drafting teams and the ongoing theme of industry inclusion that is evident in the efforts of the teams.

Mr. Noess, along with Mr. Murphy, updated the Committee on the progress of the Critical Infrastructure Protection Reliability Standard Version 5 ("CIP Version 5") transition and related processes, and discussed the drafting of the CIP Version 5 Reliability Standard Audit Worksheet, which has been in development in connection with the revisions to CIP Version 5.

Ms. Agnew reviewed the efforts of industry participants and the NERC standards department in 2014, highlighting the significant progress made in addressing directives issued by the Federal Energy Regulatory Commission (the "Commission"), and provided an update on the status of current projects in development and pending at the Commission.

Ms. Agnew noted that as the standards development process moves toward "steady state", NERC and the industry have the opportunity to continuously review the standards through processes and channels such as the Independent Expert Review Panel ("IERP"). She reviewed the standards that were recommended for modification or retirement as a result of the recommendations of the IERP, including 147 requirements that were recommended for retirement and another 25 that were recommended for

modification. Ms. Agnew stated that these recommendations are considered by standard drafting teams as appropriate to determine whether the retirement or modification is necessary.

Ms. Agnew also stated that NERC has made an effort to develop and communicate criteria for what constitutes an effective, enforceable Reliability Standard. Specifically, she highlighted the Ten Benchmarks guidance document as well as other resources available to standard drafting teams. She noted that in the development of the IERP template, the Standard Committee organized an oversight team to provide guidance to the standard drafting teams related to the drafting of quality standards.

In response to a stakeholder request for a chart indicating regulatory approval status for each project, Ms. Agnew stated that she would include that information in future reports.

Ms. Agnew reiterated NERC's commitment to continued collaboration with Canadian entities in the development of all current and future projects.

Adjournment

There being no further business, and upon motion duly made and seconded, the meeting was adjourned at 11:00 a.m. Pacific.

Submitted by,



Charles A. Berardesco
Secretary

ERO Enterprise IT Application Strategy Update

Action

Information

Background

During 2014, NERC and the Regional Entities reached a consensus on prioritizing the development and implementation of software applications supporting common NERC and Regional Entity operations including data collection, management, and analysis. This strategy (ERO Enterprise IT Application Strategy) and associated application development and configuration, continues to be a multi-year initiative that will improve productivity and visibility to data, while reducing the complexity of managing multiple applications. Detailed information regarding the ERO Enterprise IT Strategy, applications, and budget was included in NERC's 2015 Business Plan and Budget and will be included in NERC's 2016 Business Plan and Budget.

The Standards Oversight and Technology Committee (SOTC) subgroup, comprised of three SOTC members, continues to provide additional oversight to this effort, as well as deliver feedback to the SOTC on the development and execution of the ERO Enterprise IT Strategy. During the February 2015 SOTC meeting, NERC management provided an update on the ERO Enterprise IT Strategy, which included an update on six ERO IT Guiding Principles including a bias for proven off-the-shelf solutions and ensuring the right information is provided to the right people at the right locations. Updates were also provided on six priority ERO applications including Standards Balloting Applications, Reliability Assessment Data, Events Analysis, and Compliance Tools Assessment.

A presentation will be made at the May 2015 meeting providing progress of the ERO Enterprise IT Strategy and its guiding principles, updates on the development of key applications, an update on ES-ISAC and the Cybersecurity Risk Information Sharing Program technologies, NERC's plans for a document management program, 2015 IT Spend Plan, and forecasts for 2016-2018. An update on the ERO Program Management Office and an overview of future priorities for 2015 will also be addressed.

NERC Document Management Program Update

Stan Hoptroff, Vice President and Chief Technology Officer
Standards Oversight and Technology Subcommittee
April 16, 2015

RELIABILITY | ACCOUNTABILITY



- Classification and management of Confidential Information
- Address audit findings/mitigate organizational risk
- Improve information access (search)
- Facilitate working group, team and stakeholder collaboration
- Support the company's document retention schedule
- Make it easier to retrieve documents
- Create audit trails
- Enable workflow for reviews and approvals
- Increase efficiency and employee productivity

- Addresses key 2014 audit findings
- Provides the following “must have” features:
 - Document classification
 - Document access
 - Document retention
 - Document sharing, collaboration and versioning
 - Document workflow and audit trail
- Includes:
 - Management oversight (policies)
 - Training
 - Communications

Business Needs

Address Information Security Audit Findings

Document Classification

Document Access

Document Retention

Document Sharing, Collaboration and Versioning

Document Workflow and Audit Trail

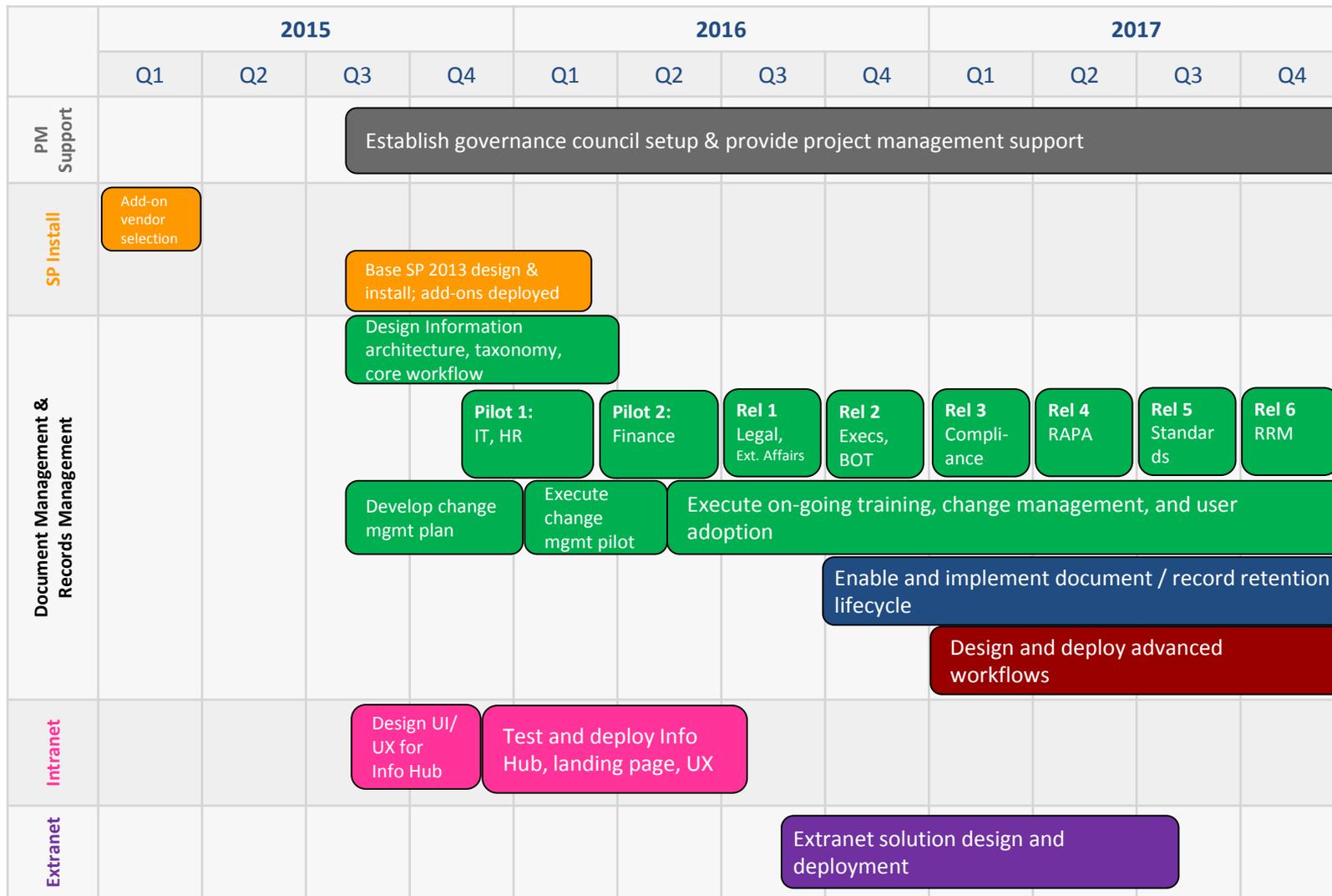
Program Execution

Hardware and Software Procurement

Management Oversight (Policies)

Communications and Training

Project Management Support and Knowledge Transfer



Item	Vendor	2014	2015	2016	2017	Total
PwC Professional Services	PwC					
<i>Software Installation and Configuration/Extranet</i>			178,000	140,000	50,000	
<i>Intranet User Interface Design/Workflow/Collaboration</i>			125,000	230,000	250,000	
<i>Information Architecture: Taxonomy, Metadata, Data Classification</i>			210,000	60,000		
<i>Training and Communications</i>			125,000	135,000	55,000	
Subtotal: PwC Professional Services		208,000	638,000	565,000	355,000	1,766,000
PwC Travel Expenses		-	25,000	35,000	35,000	95,000
Total PwC Services		208,000	663,000	600,000	390,000	1,861,000
NERC Hardware & Software	Presidio/ Microsoft		200,000	-	-	200,000
Maintenance & Support			50,000	50,000	50,000	150,000
Total 4-Year Spend Projection		208,000	913,000	650,000	440,000	2,211,000

Financial Spend Plan-Capex and Opex

	2014		2015		2016		2017	
	Capex	Opex	Capex	Opex	Capex	Opex	Capex	Opex
Professional Services/Travel Expenses	208,000		538,000		465,000		335,000	
NERC Hardware & Software			200,000					
Maintenance & Support				50,000		50,000		50,000
Communications and Training				125,000		135,000		55,000
Subtotal	208,000		738,000	175,000	465,000	185,000	335,000	105,000
Total Spend	208,000		913,000		650,000		440,000	

	2014	2015	2016	2017	Total
Budgeted	208,000	250,000	650,000	440,000	1,548,000
Incremental		663,000			663,000
Total Spend	208,000	913,000	650,000	440,000	2,211,000

	Midwestern Utility	Central US Utility	West Coast Utility	NERC
Business Drivers	<ul style="list-style-type: none"> • eDiscovery • Enhanced DM capability • Improved data classification 	<ul style="list-style-type: none"> • Enhanced DM capability • Modernize infrastructure 	<ul style="list-style-type: none"> • Modernize DM/RM program capabilities • Regulatory gaps, fines (\$2B historic fines) 	<ul style="list-style-type: none"> • Improve data classification • Enhanced DM capabilities • Address audit findings • Improved workforce productivity • External collaboration capability
Program Costs/ Budget	\$12M	\$50M	\$30M	\$2.2M
Per Seat Cost	\$12K per user (1,000 active users)	\$10K per user (5,000 target users)	> \$10K per active user	\$11K per active user (200)



Questions and Answers

FAC-003: Research and Development Results of Gap Factor Verification

Action

Update

Background

In [Order No. 777](#), the Federal Energy Regulatory Commission (FERC) approved Reliability Standard FAC-003-3 and directed NERC to conduct testing to support the Minimum Vegetation Clearance Distances (MVCDs) established in Reliability Standard as approved. NERC engaged the Electric Power Research Institute (EPRI) to conduct the testing with the support of an industry advisory group and the participation of FERC staff. Testing began in early 2014.

Reliability Standard FAC-003-3 utilizes a “defense-in-depth” approach to manage vegetation located on transmission rights-of-way by minimizing encroachments from adjacent vegetation to prevent the risk for vegetation-initiated outages. The Reliability Standard requires MVCDs derived from the Gallet equation, which is the method used to compute the critical flashover voltage of various air gap geometries, adjusted by respective “[gap factors](#).” This method provides MVCDs for operating voltages and transmission configurations, adjusted for various altitudes, with a probability of flashover in the range of 10^{-6} .

The preliminary results of the tests show that the gap factor applied in the Gallet equation to calculate MVCDs should be modified by increasing the MVCDs for all alternating current system voltages covered by Table 2 of the Reliability Standard. Further testing will be performed in the second quarter of 2015 to validate the results and the corresponding MVCDs, which will determine the appropriate gap factor for use in Reliability Standard FAC-003-3.

In recognition of the potential reliability implications resulting from the findings of the gap factor verification research, a wide range of communication tools are being developed to provide information to the industry. Those tools include a preliminary report, an advisory alert, and a webinar, among others. The advisory alert will provide interim information to applicable Transmission Owners and Generator Owners to allow for adjustments to vegetation management programs to account for the increased MVCDs as necessary.

In addition, a Standard Authorization Request will be developed by the industry advisory group to initiate a limited scope standards development activity to adjust the MVCD values in Reliability Standard FAC-003-3 based on the final results of the EPRI research.

Future of Standards Development

Action

Discussion

Background

Since the initial set of Reliability Standards became mandatory and enforceable on June 18, 2007, NERC and the industry have taken significant strides towards developing new and improving existing Reliability Standards, and addressing outstanding FERC directives. This work, while beneficial, resulted in Reliability Standards existing in a constant state of change. However, as a result of focused efforts over the last few years, Reliability Standards are expected to reach “steady-state” by early 2016, with the majority of FERC directives addressed, and all requirements recommended for retirement by the Paragraph 81 project and the Independent Experts Review Panel considered.

As Reliability Standards approach this milestone, the Board has expressed an interest in input on whether Reliability Standards should be considered stable once they reach “steady-state”, or if there is a desire to make further improvements. For example, a project could be initiated to focus on: 1) a review of the content of Reliability Standards to identify requirements that could be more effectively written to mitigate risks to the Bulk Power System (BPS); 2) whether Reliability Standards are results-based and drafted with high quality; 3) whether Reliability Standards are concise or if the number of requirements could be reduced; and 4) whether compliance expectations are clear. If, however, feedback indicated that Reliability Standards should be considered stable when they reach steady-state, improvements would be made to Reliability Standards only in response to FERC directives or newly identified risks to the BPS.

The discussion at the May 2015 Standards Oversight and Technology Committee (SOTC) meeting will help to inform the path forward for standards development. The following questions were provided in the MRC policy input letter and should guide the SOTC discussion:

1. Content: Could Reliability Standard requirements be improved to more effectively mitigate risks to the BPS? Do they have the content to maintain necessary accountability?
2. Quality: Are Reliability Standards concise with clear compliance expectations? Are the standards drafted with high quality?
3. Results-based: Are Reliability Standards results-based? (i.e., *Have “X” result* compared to *Have a process*)
4. Technology neutral: Are Reliability Standards sufficiently flexible to address projected technology changes and enhancements to the grid?
5. Improvements needed: What benefits might result from additional improvements to Reliability Standards? Is there a level of diminishing returns on content and quality? If Reliability Standards should be improved, what is the appropriate timing and best way to proceed?

When addressing these questions, the following principles should be considered:

- Reliability Standards should contain actions and accountability measures that support the reliable operation of the BPS.
- Reliability Standards should support the mitigation of identified risks to the BPS. Depending on the risk, a Reliability Standard may be the best solution. However, Reliability Standards are not the only solution to address all risks to reliability.
- The scope of the risk covered by a given Reliability Standard and the associated compliance expectations should be aligned and made public.

Review of NERC's ANSI Accreditation Status

Action

Review

Background

The Standards Oversight and Technology Committee (Committee) Mandate calls for the Committee to periodically review NERC's American National Standards Institute (ANSI) accreditation status. The following report is provided to support the Committee's review.

On March 24, 2003, ANSI's Executive Standards Committee notified NERC of its approval of NERC's application for accreditation as a developer of American National Standards. Since receiving its original accreditation, NERC has revised its standard development process multiple times, most recently in 2013, and has continuously maintained its status with ANSI as an accredited standard developer.

In order to maintain accreditation, ANSI requires that accredited standard developers:

- Submit their accredited procedures for review and approval by ANSI on a five-year cycle, with a justification for why the accreditation remains relevant if the accredited standard developer does not maintain one or more approved American National Standards. (NERC does not maintain any such standards.)
- If the accredited standard developer revises its procedures, they must submit the revised procedures for review and approval by ANSI.
- Comply with audits of the standard developer's procedures and practices, conducted under the supervision of the ANSI Executive Standards Committee.

NERC has complied with each of these requirements, and most recently received notification of its continuing accreditation in response to submitting the revised Standard Processes Manual on May 17, 2013.

Reliability Standards Quarterly Status Report

Action Information

Background

Attached is the Reliability Standards Quarterly Status Report. Highlights include:

- **2015-2017 Reliability Standard Development Plan (RSDP) Progress**
 - Provides an overview of the progress made by NERC staff, the Project Management and Oversight Subcommittee (PMOS), and standards drafting teams in standards development and project scheduling coordination anticipated by the 2015-2017 RSDP.
- **Standards Development Forecast**
 - Provides a forecast of Reliability Standards anticipated for completion and submission to the NERC Board of Trustees for adoption through February 2016, including one project, Project 2014-04 (Physical Security), with a regulatory deadline of July 27, 2015.
- **Paragraph 81 and Independent Experts' Quarterly Update**
 - Provides an update on the status of the Paragraph 81 and Independent Experts Review Panel's recommendations for requirement retirement, as well as an overview of the total number of retirements made pursuant to these recommendations.
- **Regulatory Directives Update**
 - Provides a report on the progress made in addressing outstanding FERC directives and guidance.
- **Standards Committee (SC) Report**
 - SC overview of key activities and progress from the previous quarter, including:
 - The continued activity and progress of the Standards Committee subcommittees, PMOS, and the Standards Committee Process Subcommittee, and
 - Possible revisions to FAC-003-3 as a result of recent research and development related to gap factor verification.

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Reliability Standards

Standards Oversight and Technology Quarterly
Report

May 6, 2015

RELIABILITY | ACCOUNTABILITY



**3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com**

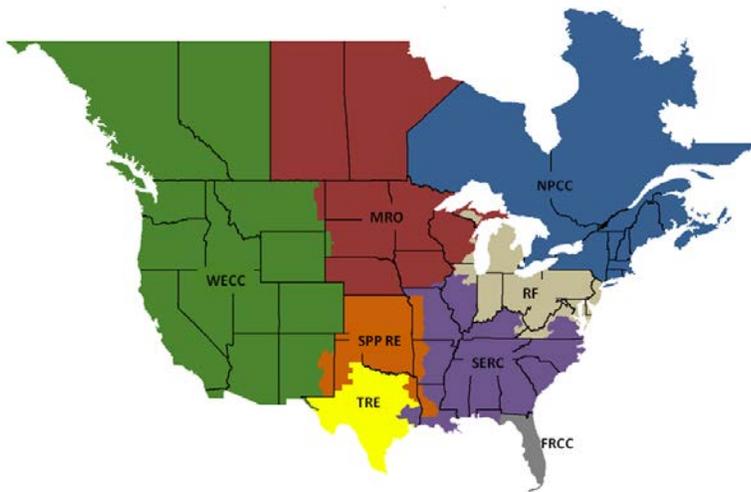
Table of Contents

Preface.....	iii
2015-2017 Reliability Standards Development Plan Progress	1
Standards Development Forecast (Continent-wide).....	2
Board Forecast for Standard Projects in Active Development	2
May 2015.....	2
August 2015	2
November 2015.....	2
February 2016	2
Projects with Regulatory Deadlines	3
Paragraph 81 and Independent Experts’ Quarterly Update	4
Progress to Date	4
Background	4
Regulatory Directives Update.....	5
Directives Filed in 2015.....	5
Directives Issued in 2015	5
Summary of Total Directives.....	5
Trend in Number of Requirements	6
Standards Committee Report.....	8
Background and Summary.....	8

Preface

The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to ensure the reliability of the bulk power system (BPS) in North America. NERC develops and enforces Reliability Standards; annually assesses seasonal and long-term reliability; monitors the BPS through system awareness; and educates, trains, and certifies industry personnel. NERC’s area of responsibility spans the continental United States, Canada, and the northern portion of Baja California, Mexico. NERC is the electric reliability organization (ERO) for North America, subject to oversight by the Federal Energy Regulatory Commission (FERC) and governmental authorities in Canada. NERC’s jurisdiction includes users, owners, and operators of the BPS, which serves more than 334 million people.

The North American BPS is divided into the eight Regional Entity (RE) boundaries, as shown in the map and corresponding table below.



FRCC	Florida Reliability Coordinating Council
MRO	Midwest Reliability Organization
NPCC	Northeast Power Coordinating Council
RF	ReliabilityFirst
SERC	SERC Reliability Corporation
SPP-RE	Southwest Power Pool Regional Entity
TRE	Texas Reliability Entity
WECC	Western Electricity Coordinating Council

2015-2017 Reliability Standards Development Plan Progress

The [2015-2017 RSDP](#), developed by NERC staff in conjunction with members of the Standards Committee (SC), is a continuation of the approach set forth in the [2013-2015 RSDP](#) and [2014-2016 RSDP](#). It outlines a plan to complete the majority of the work necessary to bring the NERC Reliability Standards to “steady-state” by addressing FERC directives, Paragraph 81 (P81) and the Independent Experts’ Review Panel (IERP) recommendations for retirement and quality improvement, and considering other initiatives such as results-based standards. This RSDP was adopted by the NERC Board of Trustees (Board) at its November meeting and was filed with FERC on December 31, 2014.

NERC staff, the Project Management Oversight Committee, and standards development teams have worked closely together to spread the project completion dates and presentations to the NERC Board evenly throughout the year. As project timelines shift due to complexities or issues that need to achieve consensus, every effort is being made to pull some projects forward as others that need additional time are shifted further back in the year. Industry support in being able to maintain the target delivery dates is critical, and industry’s efforts to have open discussions to resolve issues is appreciated.

Standards Development Forecast (Continent-wide)

Board Forecast for Standard Projects in Active Development

May 2015

- Project 2008-02.2: Phase 2 of Undervoltage Load Shedding (UVLS): Misoperations (PRC-004 and PRC-010)
- Project 2014-01: Standards Applicability for Dispersed Generation Resources (medium priority standard PRC-005)
- Project 2014-04: Physical Security Directives¹

August 2015

- Project 2007-06: System Protection Coordination (PRC-027-1)
- Project 2007-17.4 PRC-005-3 Directive²
- Project 2010-14.1: Phase 1 of Balancing Authority Reliability-based Controls: Reserves (BAL-002)
- Project 2010-14.2.2: Phase 2 – Balancing Authority Reliability-based Controls: BAL-004
- Project 2015-02: Periodic Review of EOP Standards (EOP-004, EOP-005, EOP-006, and EOP-008)

November 2015

- Project 2007-06.2: System Protection Coordination (PRC-001)
- Project 2010-04.1 MOD-031 Directives (MOD C)³
- Project 2010-14.2.1: Phase 2 – Balancing Authority Reliability-based Controls Project 2012-09: BAL-005 and BAL-006
- Project 2015-03: Periodic Review of System Operating Limit Standards (FAC-010, FAC-011, and FAC-014)
- Project 2015-04: Alignment of NERC Glossary of Terms used in NERC Reliability Standards and the Definitions Used in the Rules of Procedure
- Project 2015-06: Interconnection Reliability Operations and Coordination (IRO-006-East, IRO-009)

February 2016

- Project 2009-02: Reliability Monitoring and Analysis Capabilities
- Project 2010-05.2: Phase 2 of Protection System Misoperations: SPS/RAS

¹ See FERC Order No. 802 issued on November 20, 2014

² See FERC Order No. 803 issued January 22, 2015

³ See FERC Order No. 804 issued February 19, 2015

Projects with Regulatory Deadlines

There is currently one project with a regulatory deadline:

Table 1: Projects with Regulatory Deadlines

Project	Regulatory Deadline
Project 2014-04 Physical Security	July 27, 2015

Paragraph 81 and Independent Experts' Quarterly Update

Progress to Date

In Table 2 below, a summary of the progress that has been made in addressing the P81 Phase 2 concerns and the IERP recommendations for retirement is provided. A spreadsheet outlining the specific requirements that are the subject of the P81 revision or the IERP recommendations, the projects that addressed them, and the resolutions of those projects have been posted to the standards page on the [NERC website](#).

Background

On November 21, 2013, FERC issued Order No. 788 approving the retirement of the requirements proposed for retirement under Phase 1 of the P81 project. At the conclusion of Phase 1, 217 requirements remained for consideration in Phase 2 of the project. In addition, the IERP recommended a total of 257 requirements for retirement. Some requirements were included in both sets of recommendations, and eliminating these duplications resulted in a total of 281 requirements proposed for retirement. Of these, all except eight candidates have either been addressed or are in the process of being addressed in either a current project or five-year review.

Table 2: Progress Addressing P81 and IERP Recommendations for Retirement		
	Current Status	P81 and IERP Recommendations for Retirement
Total*		281
Addressed	238	
In current projects	35	
Not assigned	8	
*Unique requirements		

There are three possible ways in which the requirements proposed for retirement (above) may have been addressed: 1) The standard drafting teams may have retired the requirement in its entirety, 2) the requirement may have been modified, or 3) the requirement may have been retained in its entirety. The analysis is qualitative and was conducted with a conservative approach; thus a categorization of “modified” indicates that a portion, but not all, of the requirement, sub-requirement or part was retired. If any action in the original requirement was retained, the requirement received a categorization of “modified.” Table 3 provides a summary of the 238 requirements that have been addressed to date:

Table 3: Resolutions for P81 and IERP Recommendations for Retirement		
Resolution	Number	Percent
Retired ⁴	110	46%
Modified	103	43%
Retained	25	11%
Total	238	

⁴Twelve of these were retired in the P81 Phase 1, but were included on the list as they were recommended for retirement by the Independent Expert Review Panel.

Regulatory Directives Update

Directives Filed in 2015

The directives filed with FERC in 2015 are:

- Q1
 - Project 2013-03 Geomagnetic Disturbance Mitigation (14 directives)
 - Project 2014-02 Critical Infrastructure Protection Version 5 Revisions (6 directives)
 - Project 2014-03 TOP/IRO Revisions (39 directives)
 - Project 2008-02 Undervoltage Load Shedding PRC-010 (2 directives)

Directives Issued in 2015

The directives issued by FERC in 2015 are:

- Q1
 - Order No. 803 pertaining to PRC-005-3 (2 directives)
 - Order No. 804 pertaining to MOD-031 (2 directives)

Summary of Total Directives

As of March 31 2015, there were 33 standards-related directives, including FERC guidances, to be resolved. Table 4 below illustrates the progress to address FERC directives issued prior to 2013, post-2012, and in total. It does not include non-standards related directives.

Table 4: Summary of Total Directives			
	Pre-2013 Directives*	Post 2012 Directives*	Total
Issued prior to year-end 2012	191		
Issued since year-end 2012		52	
Resolved as of March 31, 2015	167	43	
Remaining	24	9	33
Projected to be resolved in 2015	19	6	25
Projected remaining at year-end 2015	5	3	8

*Does not include directives for other NERC departments

Trend in Number of Requirements

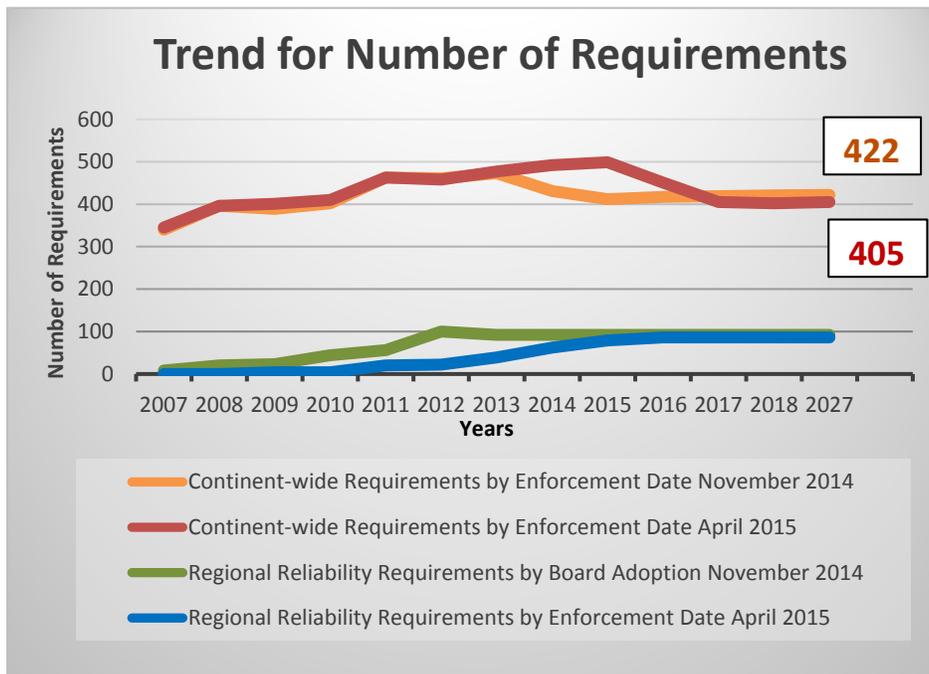
As the NERC Reliability Standards become steady-state there is an expectation that the total number of requirements subject to enforcement will be reduced. To measure the accuracy of NERC’s expectation, NERC staff used the *US Enforcement Status/Functional Applicability spreadsheet*⁵ to analyze the trend in the total number of Board-approved requirements at the end of each year since standards became enforceable in the United States in 2007.

The below chart (Chart 1: Trend for Number of Requirements) was created⁶ for the November 2014 SOTC meeting and was based on each requirement’s U.S. enforcement date in the *US Enforcement Status/Functional Applicability spreadsheet*. For comparison, this chart has been updated with information contained in the spreadsheet as of March 29, 2015. This chart updates the projection for 1) pending continent-wide retirements and 2) the number of regional reliability standards. The variances within continent-wide standards were removed from the regional reliability standards line.

The line indicating the number of retirements using the November 2014 data shows a downward slope in 2014 - 2015. This downward trend was anticipated as pending projects were filed. The line indicating the number of requirements using the March 2015 data shows the downward trend in 2016 - 2017 to more accurately reflect the anticipated enforcement dates. The projects pending that have significant reductions in the number of requirements include Project 2014-03 TOP/IRO Revisions with a net reduction of 57 requirements, Project 2012-05, Available Transmission System Capability (MOD A) with a net reduction of 50 requirements and Project 2009-03 Emergency Operations with a net reduction of 17 requirements. Table 5 below provides the list of projects pending approval. Overall, the total pending projects reflect a potential reduction of 108 requirements.

The chart below also includes the projected number of requirements at the end of each of the data lines. In November 2014, it was anticipated that the number of enforceable standards, once all projects were implemented, would be 422. At this time, the projection is 405 requirements.

Chart 1: Trend for Number of Requirements



⁵Available from the Standards section of the NERC website: <http://www.nerc.com/pa/Stand/Pages/default.aspx>.

⁶This chart was developed using Q2 2014 data.

Table 5: Projection of Projects Pending Regulatory Approval

Project	Title	Board Adoption	Filing Date	Projected	Projected	Net Requirements
				FERC Approval Year	Enforcement Year	
2006-06	Reliability Coordination	11/7/2012	5/14/2014	2015	2016	5
2007-02	Operating Personnel Communications Protocols	5/7/2014	5/14/2014	2015	2016	4
2007-11	Disturbance Monitoring	11/13/2014	12/15/2014	2015	2016	0
2007-17.3	Protection System Maintenance and Testing – Phase 3 (Sudden Pressure Relays)	11/13/2014	12/18/2014	2015	2016	0
2008-02	Undervoltage Load Shedding	11/13/2014	2/6/2015	2015	2016	4
2009-03	Emergency Operations	11/13/2014	12/29/2014	2015	2016	-17
2010.13.3	Phase 3 of Relay Loadability: Stable Power Swings	12/17/2014	12/31/2014	2015	2018	4
2010-05.1	Protection System Misoperations	8/14/2014	9/15/2014	2015	2016	0
2010-14.1	Phase 1 of Balancing Authority Reliability-based Controls: Reserves	8/15/2013	4/2/2014	2015	2016	-2
2012-05	ATC Revisions (MOD A)	2/6/2014	2/10/2014	2015	2017	-50
2014-02	Critical Infrastructure Protection Standards Version 5 Revisions	11/13/2014	2/13/2015	2015	2016/2017	1
2014-03	Revisions to TOP and IRO Standards	8/16/2012	4/16/2013	2015	2016	-57

Standards Committee Report

Background and Summary

Standards Committee (SC) Subcommittee activity

The Project Management Oversight Subcommittee (PMOS) liaisons continue to work with NERC staff, standards drafting teams, and stakeholders to enhance stakeholder outreach and resolution of outstanding issues on Reliability Standards projects. PMOS contributions over the last few years have been meaningful, and they have facilitated the efforts of NERC and stakeholders to achieve a body of steady-state Reliability Standards by the end of 2015 or soon thereafter.

The SC Process Subcommittee continues to work with NERC staff to streamline and optimize procedures. Significant progress has been made on streamlining procedures made over the last year, and more work on optimizing processes is ongoing.

Possible Changes to Reliability Standard FAC-003

NERC staff briefed the SC on the preliminary Electric Power Research Institute report on vegetation management clearances requirements. As the report is finalized, the SC will work with NERC staff to expeditiously ensure that any modifications to Reliability Standard FAC-003 proceed through the standard development process and are timely presented to the Board of Trustees, either in November 2015 or February 2016.