

THE UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Reliability Technical Conference

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**Prepared Comments of Brian J. Murphy,
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Standards Committee
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I wish to thank Acting Chair LaFleur and each of the Commissioners for inviting me to speak today in my capacity as Chair of the NERC Standards Committee.¹

Executive Summary

The Standards development process has benefitted from the reforms implemented in 2013. Overall, the Standards development process is now more nimble, effective, efficient and capable of building consensus in a timely manner. The reformed process is producing high quality, consensus Reliability Standards in approximately one year and sometimes less, which is also greatly assisting the goal of developing a set of clear, concise, high quality and technically sound Reliability Standards that are results-based, while retiring requirements that do little to promote reliability (*i.e.*, steady state) by the end of 2015. See Attachment A (timeliness of 2013 Standard projects produced under the current reforms).

The efficiency gains have been realized from the Commission-approved June 26, 2013 revisions and enhancements to the American National Standards Institute (ANSI) process set forth in NERC's Standards Processes Manual, combined with the Standards Committee and NERC Staff working together to foster an environment in which skillful dialogue and listening to stakeholders, NERC Staff and FERC Staff perspectives are promoted to assist the standard drafting teams develop high quality Reliability Standards.

Under the very capable leadership of NERC's Mark Lauby, and, now his successor, Valerie Agnew (NERC Standards Staff), along with Charlie Berardesco and Holly Hawkins (NERC Legal) the requisite leadership, resources and skillsets have been dedicated to effectively manage and facilitate standard drafting teams. Similarly, the members of the Standards Committee and the chairs and vice-chairs of the stakeholder standard drafting teams have equally demonstrated

¹ The Standards Committee is comprised of 22 stakeholders, including representatives from the electric industry, customers, consumer advocates, public service commissions and Canada. The Standards Committee reports to the NERC Board of Trustees, and works with NERC Staff to manage the Standards development process.

the leadership and dedication needed to ensure high quality Reliability Standards are produced in a timely manner. These commitments coupled with the collaborative working relationship between the Standards Committee, NERC Staff, NERC Legal, FERC Staff, stakeholders and standard drafting teams have provided significant tangible benefits and efficiencies that are apparent from the current production, timeliness and quality of Reliability Standards.

Additional efficiencies have resulted from the continued coordination between the Standards Committee/NERC Staff and the other NERC standing committees, including the Reliability Issues Steering Committee (RISC),² the Operating Committee and the Planning Committee, to address the need for and prioritization of Standard projects related to new and emerging issues.

In sum, the 2013 reforms demonstrate that the Electric Reliability Organization (ERO) is managing the Standards development process effectively and efficiently consistent with the ANSI process. These improvements also seem to suggest that there now is less of a need for regulatory imposed deadlines to file specific Reliability Standards by a date certain.

Comments

The Commission's June 10, 2014 technical conference posed the following Panel IV: ERO Performance questions related to the Standards development process:

a. Standards Development Process

- What efficiencies have resulted from the revision of NERC's standards development process?
- In what ways has the RISC improved the standards development process? On what bases have the current standards development projects been prioritized and have they deviated from last year?

Also, given the recent Standard activities on cyber and physical security, these comments will briefly address the following questions posed for Panel IV:

c. Security Issues

- What is the status of the effort to enhance physical security of the grid?
- What progress has been made regarding CIP version 5 implementation?
 - i. What issues have entities discovered during the initial effort to implement CIP version 5?

² As Chair of the Standards Committee, I am also a member of RISC.

Efficiencies in the Standards development process

The efficiencies that have resulted from the 2013 revisions to the Standards development process include the following:

- Streamlining, in part, and enhancing, in part, the Standards Processes Manual (June 26, 2013 Commission-approved revisions)³
 - Shorter periods of time are needed to develop high quality Reliability Standards (approximately a year, sometimes less), while continuing to follow ANSI
 - An increased use of an interactive, learning-environment, engagement model, which includes NERC-lead technical conferences, outreach to Trade Associations, regional committees, generator and transmission forums, as well as the use other consensus building tools to generate discussion and resolution
 - Judicious use of the Standards Processes Manual waiver provision to shorten comment and ballot periods (June 26, 2013 Commission-approved revision)
 - Enhanced communication and the use of communication tools related to the Standards development, including a comprehensive weekly standards bulletin (which contains projected Standard posting schedules and a project tracking spreadsheet, etc.), the format of which were jointly developed by NERC Staff and stakeholders
- Well-managed standard drafting teams
 - More emphasis on project management (June 26, 2013 Commission-approved revision)
 - The targeted completion for Standard projects (from start to Board of Trustees (BOT) approval) is generally a year (see Attachment A)
 - Standard drafting teams held to project schedules by NERC Staff and the Standards Committee, with the assistance of the 2013 created Project Management and Oversight Subcommittee (PMOS)
 - Timely addressing FERC directives – on target to address outstanding FERC directives by the end of 2015, if not sooner

³ For example, the Commission-approved elimination of the Standards Processes Manual requirement mandating a 30 day initial formal comment period (without a ballot) for a Standard, in favor of going directly to a 45 day comment period with a ballot.

- Smaller standard drafting teams (8 to 10 members), and more care is taken in the composition of the team to assure the right mix of skills
 - More leadership, strategically minded individuals and technically proficient stakeholder subject matter experts volunteering to be on standard drafting teams
 - More attention from NERC Staff and NERC Legal to provide skillful facilitation, legal and technical writing to assist standard drafting teams (June 26, 2013 Commission-approved revision)
 - A dedicated Standard Committee liaison to each standard drafting team⁴ who partners with NERC Staff to resolve impasses and foster an open and inclusive environment
- Increased coordination with NERC Compliance and Enforcement
 - Increased commitment to post a draft Reliability Standard Audit Worksheets (RSAWs) during the time period in which the associated Reliability Standard is posted for comment and ballot, which, at times, has included working with standard drafting teams on the technical aspects of the RSAWs
 - The development of a RSAW revision process, which panel member Carol Chinn was instrumental in leading and shepherding
- Continued coordination between NERC Staff, the Standards Committee and the other NERC standing committees
 - For example, the Planning Committee's reports on the scope and focus for Reliability Standards related to power swings and sudden pressure relays provided the foundation for the associated standard drafting teams to proceed with Standard development

RISC's role in improving the Standards development process

The coordination between the Standards Committee and RISC is assisting in improving the Standards development process. The RISC is an advisory committee that reports directly to the NERC BOT and assists the BOT, NERC standing committees, NERC staff, regulators, Regional Entities, and industry stakeholders in establishing a common understanding of the scope, priority and goals for the development of solutions to address risks to the Bulk Electric System (BES). To carry out its responsibility to provide a framework for steering, developing, formalizing and organizing recommendations to help NERC and the industry effectively focus

⁴ The Standards Committee liaisons are appointed to each standards drafting team by PMOS.

resources on addressing critical issues to improve the reliability of the BES, the RISC presented an initial report to the BOT in February 2013. The report provided a prioritization of reliability risk areas, categorizing each area as High, Medium, or Low priority.

The Standards Committee and NERC Staff, with the assistance of RISC, have employed the RISC categorization of the risk areas to prioritize Standard projects. For example, in the 2013-2015 Reliability Standards Development Plan (RSDP), the Standards Committee adopted the following elements to prioritize Standard projects: (1) RISC Category Rankings; (2) regulatory directives; (3) regulatory deadlines imposed by applicable governmental authorities, such as FERC or the various Canadian regulators, or the NERC BOT; (4) Reliability Standard requirement candidates for retirement; (5) the June 2013 Independent Expert Review Panel (IERP) report's content and quality assessments; and (6) additional considerations (fill-in-the-blank Standard status and five-year assessment commitments). Primary consideration is provided to RISC Category Rankings, regulatory directives, and regulatory deadlines, which is further informed by the other prioritization elements (4, 5, and 6). Based on the application of these elements, each Standards project is prioritized as High, Medium, Low, or Pending Technical Committee input.

This approach was reviewed and endorsed by the Standards Committee, NERC Staff and RISC. The application of this approach produced a priority ranking of Standard projects to be initiated in 2014, which was also reviewed and endorsed by the Standards Committee, NERC Staff and RISC. See Attachment B.

This same prioritization approach has also been employed by the Standards Committee to prioritize Standard projects not foreseen in the 2013-2015 RSDP. For example, the Standards Committee assigned a high priority to revising the newly created 2014 Transmission Operations (TOP) and Interconnection Reliability Operations and Coordination (IRO) Reliability Standards project, based on the following:

- RISC ranking: High (Situational Awareness)
- FERC: NOPR proposing remand
- FERC deadline for re-filing of standards January 31, 2014
- IERP – quality and content issues

In sum, the Standards Committee/NERC Staff, with the assistance of RISC, has developed a prioritization approach for Standard project development. As to the question of whether there has been a deviation from 2013, there has been no deviation per se, but, rather, the current prioritization approach is sufficiently flexible for Standards Committee and NERC Staff to accommodate unforeseen Standard projects like TOP/IRO and Physical Security.

In addition to the work by the Standards Committee, NERC Staff and RISC on a prioritization approach, the Standards Committee, NERC Staff and RISC are coordinating the consideration of new and emerging issues, and, particularly the need for a Reliability Standard versus another reliability tool, such a technical guideline issued by a technical committee. RISC, with input from the NERC technical committees, is currently well-positioned to consider new and emerging problem statements, so that the Standards Committee and NERC Staff are better

informed as to whether a Standards project is needed; and, if needed, in what timeframe and at what level of priority. This role of RISC will likely increase in importance given that the current body of Standards will be at a steady state by the end of 2015, and, thus, the consideration of any new Standard over and above the steady state Standards will need careful consideration prior to entering into the Standards development process.

Challenges

There are a few protection and control Standards projects that were initiated prior to the 2013 reforms that the Standards Committee and NERC Staff are dedicated to working together to complete this year. Also, the complex nature of the Geomagnetic Disturbance (GMD) stage 2, and the revisions to the TOP/IRO and Critical Infrastructure Protection (CIP) Standards result in a unique challenge: simultaneously developing multiple technically complex Standards under closely-timed FERC imposed deadlines, while, at the same time, providing stakeholders, NERC Staff and FERC Staff sufficient opportunity to ensure the technical issues are carefully considered, vetted, and the process produces high quality Standards.

Although there is confidence that the 2013 reforms provide the ERO and stakeholders the foundation to develop and timely file high quality Reliability Standards for GMD Stage 2, TOP/IRO and CIP, it is recognized that this is a new and significant challenge.

Future enhancements and efficiencies: enhanced periodic review

Pursuant to the ANSI process that is set forth in the Standards Processes Manual, NERC is required to conduct a periodic review of its Reliability Standards. This year, at the direction of the NERC BOT, the Standards Committee, NERC Staff and NERC Management developed a draft enhanced periodic review process for steady state Reliability Standards that will be posted for stakeholder comment in the near future. The two-pronged purpose of the draft enhanced periodic review is to provide a framework for conducting the periodic reviews as required in the Standards Processes Manual as well as to provide the foundation for a NERC performance metric on Standards. The draft enhanced periodic review process currently is considering inclusion of the following attributes:

- The Standards Committee appointing a standing cross-functional team, including NERC Staff and NERC standing committee representatives to work with the appointed stakeholder review team, required on the Standards Processes Manual
- Form the cross-functional team so it is operational no later than the beginning of 2015, so it may make recommendations to the Standards Committee on the Reliability Standards that should undergo the enhanced periodic review as part of the 2016-2018 RSDP
- NERC's current periodic review template has been revised and adapted to include the quality and content questions of the IERP

- A new question was added to consider whether the applicability section or requirements can be revised in consideration of the reliability impact of smaller entities, provided that there is technical justification to support the revised applicability or requirement
- The consideration of the cost effectiveness of the Standard or Standard family under review
- The retirement of requirements that do little to promote reliability
- A dashboard for each reviewed Standard indicating whether it has a score of Green, Yellow or Red using the following grading system:
 - Green = no quality and content changes needed – Standard confirmed as steady state;
 - Yellow = quality and content issues identified, but those identified are not sufficient to justify revising Standard at this time – i.e., continue to monitor; and
 - Red = Standard needs to be revised to address identified quality and content issues

Physical Security

In addition to the on-going activities of the industry, NERC’s Critical Infrastructure Protection Committee, the North American Transmission Forum, NERC Staff and various federal and state government agencies on physical security – in response to the Commission’s March 7, 2014 order, the Standards Committee, a highly qualified standards drafting team, stakeholders and the ERO developed and filed a mandatory physical security Reliability Standard on May 23, 2014.

Cyber Security

The industry is diligently working to implement version 5 of the CIP Reliability Standards, while at the same time addressing the outstanding directives from Order No. 791 related to: (i) the “identify, assess and correct” language; (ii) low impact assets; (iii) communication networks; and (iv) transient devices.

As will likely be pointed out in FERC’s panel 3 discussion, stakeholders view that there is a relationship between the implementation of the ERO’s Reliability Assurance Initiative (RAI) and the current CIP standards drafting team’s work on deleting or modifying the “identify, assess and correct” language. The Standards Committee’s liaison, the CIP standards drafting team and NERC Staff are working together to address the Commission’s directives within the imposed

deadlines, and are well aware of the complexities that are presented by the relationship between the implementation of RAI and certain revisions to the CIP standards.

Further, given the importance and technical complexity of the version 5 CIP Reliability Standards approved in Order No. 791, it is likely that questions of clarity and intent will arise during the implementation of the version 5 CIP Reliability Standards. At this time, it appears that the version 5 CIP pilots may have already identified areas in which additional technical guidance or Standard requirement revisions are needed on an expedited basis.⁵ The industry, NERC and the regions are all investing considerable time, resources and capital to implement the newest version of the mandatory cyber security Standards, and the Standards Committee is committed to helping. In addition to a demonstrated ability to develop revisions to Standards on an expedited basis, the Standards Committee also has the authority to post documents to “enhance stakeholder understanding and implementation of a Reliability Standard.”⁶ Thus, the Standards Committee stands ready to support the implementation of version 5 of the CIP Reliability Standards, including working with stakeholders and NERC to resolve any implementation issues with regard to the clarity or intent of particular Standard requirements.

Conclusion

The 2013 Standard development process reforms have proven beneficial, and have positioned the ERO to: (i) develop a set of stable, high quality, technically sound Reliability Standards by the end of 2015 consistent with the ANSI process; and (ii) be responsive to unforeseen Standard projects, as well as new and emerging reliability issues. The success of the 2013 reforms further seem to indicate that Standards development process is being effectively and efficiently managed, which suggests that there is less of a need to impose regulatory deadlines to file Standards projects by a time certain.

⁵ In light of the recent remands of CIP interpretations by the Commission and the ability to move Standard revisions through the process in a shorter period of time than in the past, there is a general thought process that stakeholders, NERC and the Commission are better served by revising a Standard requirement, with any accompanying technical support, than by an interpretation when the requirement is unclear.

⁶ Section 11 of the Standards Processes Manual.

ATTACHMENT A

Table of 2013 Standard Projects (and Physical Security): in each case, the draft Reliability Standard was first posted after the FERC-approved June 23, 2013 Standard Processes Manual reforms.

Std Project	Started	NERC BOT approval	FERC Filing
Various Interchange Scheduling and Coordination (INT) Standards	Second quarter of 2013 as a periodic review	February 2014	February 27, 2014
Geomagnetic Disturbance EOP-010	Second quarter of 2013, pursuant to FERC order 799, requiring a filing in 6 months	November 2013	November 13, 2013
Modeling, Data and Analysis (MOD)-001	First quarter of 2013 (informal development)	February 2014	February 10, 2014
MOD-031	First quarter of 2013 (informal development)	May 2014	May 13, 2014
MOD-032; MOD-033	First quarter of 2013 (informal development)	February 2014	February 25, 2014
Personnel Performance, Training, and Qualifications (PER)-005	First quarter of 2013 (informal development)	February 2014	March 7, 2014
Voltage and Reactive (VAR)-001	First quarter of 2013 (informal development)	February 2014	To be filed no later than June 6, 2014 with VAR-002
VAR-002	First quarter of 2013 (informal development)	May 2014	To be filed no later than June 6, 2014 with VAR-001
2014			
Physical Security CIP-014	March 7, 2014 Order, requiring filing in 90 days	May 13, 2014	May 23, 2104

ATTACHMENT B

2013-2015 RSDP Prioritization Ranking of Standard Projects

High Priority

- Project 2008-02 Undervoltage Load Shedding
 - o RISC: high-priority area
 - o Four FERC directives
 - o IERP considerations: some content and some quality
 - o Commitment to FERC to resolve fill-in-the-blank nature from five-year assessment

- Project 2009-02 Real-Time Reliability Monitoring and Analysis Capabilities
 - o RISC: high-priority area
 - o One FERC directive
 - o IERP considerations: situation awareness gap

- Project 2013-03 Geomagnetic Disturbance Mitigation Measures (Stage 2)
 - o RISC: low-priority area
 - o 14 FERC directives
 - o Regulatory deadline

- Project 2009-03 Emergency Operations
 - o RISC: medium-priority area
 - o 10 FERC directives
 - o 14 Para 81 candidates
 - o IERP considerations: significant content and moderate quality

Medium Priority

- Project 2007-11 Disturbance Monitoring
 - o RISC: medium-priority area
 - o One FERC directive
 - o IERP considerations: significant content and moderate quality
 - o Commitment to FERC to resolve fill-in-the-blank nature from five-year assessment

- Project 2010-05.2 Phase 2 of Protection System Misoperations: SPS/RAS
 - o RISC: high-priority area
 - o Two FERC directives
 - o Commitment to FERC to resolve fill-in-the-blank nature from five-year assessment

- Periodic Review of BAL-004, -005, and -006
 - o RISC: high-priority area
 - o 11 Para 81 candidates
 - o IERP considerations: significant content and moderate quality

- Project 2012-09 IRO Review
 - o RISC: high-priority area
 - o Three Para 81 candidates
 - o IERP considerations: moderate content and some quality

Low Priority

- Project 2010-02 Connecting New Facilities to the Grid
 - o RISC: low-priority area
 - o Two FERC directives
 - o 11 Para 81 candidates
 - o IERP considerations: moderate content and moderate quality
- Project 2010-08 Functional Model Glossary Revisions
- Project 2012-13 NUC Review
 - o RISC: high-priority area
 - o IERP: steady-state