NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Agenda
Member Representatives Committee

February 15, 2010 | 10:30 a.m. – 4:00 p.m.
Arizona Grand Resort
8000 South Arizona Grand Parkway
Phoenix, Arizona
877-800-4888

Closed Session — 10:30–11:00 a.m. (Voting Members Only)

New Member Orientation Session — 11:00 a.m.–Noon (Open)

Informational Presentations — Noon–1:00 p.m. (Open)

a. Status of WECC Synchro-Phasor Project

*b. Status of Smart Grid Activities

*c. Reliability Assessment Scenarios

MRC Meeting — 1:00–4:00 p.m. (Open)

Introductions and Chairman's Remarks

Antitrust Compliance Guidelines

Consent Agenda — Approve

*1. **Welcome New and Returning Committee Members**

*2. **Minutes**

- January 19, 2010 Conference Call
- November 4, 2009 Meeting
- August 4, 2009 Closed Meeting

*3. **Future Meetings**

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Regular Agenda[1]

*4. **Election of New Trustees**

*5. **Comments by Outgoing Chairman**

*6. **Comments by Incoming President and CEO on 2010 Priorities**

*7. **Infrastructure Security/Critical Infrastructure Protection Issues**

a. CIP-002 Action Plan

b. Bulk Power System Critical Infrastructure Protection Policy Statement

c. Aurora Vulnerability — Next Steps

d. Electricity Sector Coordinating Council Charter Revision

e. NRC-NERC Memorandum of Understanding Implementation Plan

*8. **Action Plan for Developing Risk-Informed, Performance-Based Standards**

*9. **Initiatives for Risk-Informed Reliability Improvement**

a. Development of a Risk-Management Tool

b. Action Plan for Completing Event Analysis Reports and Providing Feedback to the Industry

*10. **Plans for Study of Interconnection Frequency Response**

*11. **MRC Input on Regional Delegation Agreement Revisions**

*12. **Annual Priorities and Emphasis Discussion**

13. **Comments by Observers**

14. **Upcoming Issues for May 2010 Meeting**

15. **Other Business**

Information Only — No Discussion

*16. **Timeline for 2011 Budget and Business Plan**

*17. **Update on Regulatory Matters**

*18. **Status of System Protection and Control Initiative**

*Background material included.

[1] Board chairman John Q. Anderson will invite input from the committee sector representatives on specific agenda items.

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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.

Information Session b.
MRC Meeting
February 15, 2010

Status of Smart Grid Activities

Action Required

None

Background

1. NERC Smart Grid Task Force
   On July 30, 2009, the Planning Committee (PC) formed the Smart Grid Task Force to examine bulk power system reliability impacts of integrating Smart Grid technology. The task force will also identify which existing NERC Reliability Standards apply to Smart Grid elements and may recommend enhancements or new standards. A meeting was held on November 12–13, 2009 in Atlanta, GA and second meeting is anticipated in April 2010, with a draft report planned for June 2010.

2. U.S. National Institute of Standards and Technology (NIST) Reports
   NIST released the *Framework and Roadmap for Smart Grid Interoperability Standards, Release 1.0* on January 20, 2010, which reflects comments submitted by the industry in 2009. NIST plans to release an updated *Smart Grid Cyber Security Strategy and Requirements* report on February 2, 2010.

3. NIST Smart Grid Interoperability Panel (SGIP)
   The SGIP is a membership-based organization created by EnerNex Corp. under a contract from NIST. The goal of the SGIP is to provide an open process for stakeholders to participate in providing input and cooperating with NIST in the ongoing coordination, acceleration and harmonization of standards development for the Smart Grid. NERC is a non-voting member. The SGIP Governing Board (SGIPGB) is in the process of electing members for 22 stakeholder categories. Notably, Category 18 – Standard and Specification Development Organizations, is represented by the National Electrical Manufacturers Association (NEMA).

4. U.S. Federal Communications Commission (FCC)
   Congress has directed the FCC to develop a National Broadband Plan ensuring broadband capability for the U.S. Aspects of this plan may overlap Smart Grid and utility communications platforms. The FCC is expected to release its plan on March 17, 2010, reflecting comments submitted by industry in the last quarter of 2009.

5. American Recovery and Reinvestment Act of 2009 (ARRA)
   In October 2009, the Federal government announced that it had awarded $3.4B in smart grid investment grants to support 100 projects nationwide. NIST will receive $10M of these funds through the U.S. Department of Energy (DOE) to carry out responsibilities assigned under the Energy Independence and Security Act of 2007.

Information Session c.
MRC Meeting
February 15, 2010

Reliability Assessment Scenarios

Action Required
None

Background
1. **NERC 2010 Scenario Assessment #1:** *Potential Reliability Impacts of Rapid Demand Growth after a Long-Term Recession.*
   This assessment will identify areas where additional resources may be required if demand growth rapidly increases after eight years of economic downturn. The 2009 and 2008 10-year peak demand forecasts and capacity plans will be used as reference cases. The assessment will provide impacts on reserve margins and deliverability issues. Reserve margins could deteriorate during the latter portions of this scenario if generating units are retired sooner than expected and resource additions are unable to match rapid demand growth.

2. **NERC 2010 Scenario Assessment #2:** *Potential Reliability Impacts of U.S. Environmental Regulations on Fossil-Fired Unit Retirements.*
   This assessment will identify the impacts on reserve margins and potential deliverability issues if fossil-fired generating unit retirements are accelerated due to the composite compliance costs of a set of four U.S. Federal Environmental Protection Agency environmental regulations, including:

   - Coal Combustion Residuals Surface Impoundments with High Hazard Potential Ratings Rule (CCR)
   - Clean Air Interstate Rules (CAIR)
   - Maximum Achievable Control Technology (MACT)
   - Clean Water Act – 316b, Cooling-Water Intake Structures

   The assessment will address each individual regulation and the composite impact of all four regulations occurring simultaneously.

3. **Reliability Impacts of Climate Change Initiatives:** *Technology Reliability Assessment.*
   This report will provide a high-level reliability Assessment of Climate Change initiatives, identifying potential technical and technology related reliability considerations, and also provide a framework for scenario development and categorization. Draft conclusions, still under review by the Planning and Operating Committees, are:

   - Monitor and participate in relevant North American studies (continent-wide, national and regional) performed by industry groups and government agencies to provide insights into reliability considerations of climate change initiatives.
   - Assess the reliability implications of climate change initiatives through pertinent NERC/regional scenarios as further certainty emerges around timelines and targets.
   - Support the development of tools, technology and skill sets, as well as operational implications, needed to maintain bulk power system reliability.
   - Assess the reliability implications of climate change responsive technology deployments and identify planning, design and operational considerations.

Expected Membership of Member Representatives Committee for 2010 – 2011

Sector	Terms expiring February 2011	Terms expiring February 2012
Voting Members		
Chairman	Ed Tymofichuk	
Vice Chairman	William Gallagher	
Investor-Owned Utility	Nabil Hitti	Brian (Pete) L. Ivey
State/Municipal Utility	Gayle Mayo	Timothy J. Arlt
Cooperative Utility	John Prescott	Michael L. Smith
Federal/Provincial Utility	Anthony Montoya	Julius Pataky
Federal/Provincial Utility	Carmine Marcello[1]	
Transmission Dependent Utility	Terry Huval	John Twitty
Merchant Electricity Generator	William Taylor III	Scott Helyer
Electricity Marketer	Trent Carlson	Roy True
Large End-Use Electricity Customer	John A. Anderson	Walter Brockway
Small End-Use Electricity Customer	David Cleaver	Lawrence P. Nordell
ISO/RTO	Terry Boston	Paul Murphy
Regional Entity[2]	John Giddens (FRCC)	Maude Grantham-Richards (WECC)
State Government	Steve Oxley	Thomas Dvorsky
Non-Voting Members		
Canadian Provincial	Jean-Paul Théorêt	
Canadian Federal	Amitabha Gangopadhyay	
U.S. – Federal	Pat Hoffman	
U.S. – Federal	Joseph McClelland	
Regional Entity	Dale Landgren (MRO)	
Regional Entity	David Goulding (NPCC)[3]	
Regional Entity	James Keller (RFC)	
Regional Entity	Terry Blackwell (SERC)	
Regional Entity	Stacy Dochoda (SPP)	
Secretary	Dave Nevius	

[1] Article VIII, Section 4 of the NERC Bylaws state that [i]f the annual selection of members of the [MRC]… does not result in the number of Canadian voting representatives…on the [MRC], then the candidate who received the highest vote total among those candidates who would have qualified as Canadian voting representatives but were not elected to the [MRC] shall be added to the [MRC]. Carmine Marcello was added to the MRC under this provision.

[2] The Sector 11 Members adopted an election protocol where each year the two voting seats rotate among the seven Regional Entity seats at the MRC.

[3] Mr. Goulding will resign his position with NPCC upon his election to the NERC Board of Trustees.

Date Modified:
January 5, 2010

CERTIFICATION OF ELECTION OF MEMBERS OF THE MEMBER REPRESENTATIVES COMMITTEE 2009 SECTOR ELECTION

I certify the election of the individuals named below for the terms indicated in the election for sector representatives to the Member Representatives Committee concluded on December 23, 2009.

Results for NERC MRC 2009 Election		
SECTOR	**NAME**	**TERM ENDING**
Sector 1: Investor-Owned Utility	Brian (Pete) L. Ivey	February 2012
Sector 2: State/Municipal Utility	Timothy J. Arlt	February 2012
Sector 3: Cooperative Utility	Michael L. Smith	February 2012
Sector 4: Federal/Provincial	Julius Pataky	February 2012
Sector 4: Federal/Provincial	Carmine Marcello[1]	February 2011
Sector 5: Transmission Dependent Utility	John Twitty	February 2012
Sector 6: Merchant Electricity Generator	Scott Helyer	February 2012
Sector 7: Electricity Marketer	Roy True	February 2012
Sector 8: Large End-Use Electricity Customer	Walter Brockway	February 2012
Sector 9: Small End-Use Electricity Customer	Lawrence P. Nordell	February 2012
Sector 10: ISO/RTO	Paul Murphy	February 2012
Sector 11. Regional Entity	John Giddens	February 2011
Sector 11. Regional Entity[2]	Maude Grantham-Richards	February 2011
Sector 12: State Government	Thomas Dvorsky	February 2012

January 5, 2010

David N. Cook
Corporate Secretary

[1] Article VIII, Section 4 of the NERC Bylaws state that [i]f the annual selection of members of the [MRC]… does not result in the number of Canadian voting representatives…on the [MRC], then the candidate who received the highest vote total among those candidates who would have qualified as Canadian voting representatives but were not elected to the [MRC] shall be added to the [MRC]. Carmine Marcello was added to the MRC under this provision.

[2] The Sector 11 Members adopted an election protocol where each year the two voting seats rotate among the seven Regional Entity seats at the MRC.

Future Meetings

Action Required

Approve – November 3–4, 2010 (W–Th), re-approval necessary due to meeting location change from Atlanta, GA to New Orleans, LA.

Approve – February 16–17, 2011 (W–Th) in Phoenix, AZ as a future meeting date and location.

Background

The board has approved the following future meeting dates and locations:

- May 11–12, 2010 — Baltimore, Maryland (Tu–W)
- August 4–5, 2010 — Toronto, Canada (W–Th)

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

February 4, 2010

Mr. Ed Tymofichuk, Chairman
NERC Member Representatives Committee
Vice President, Transmission
Manitoba Hydro
820 Taylor Avenue
P.O. Box 7950
Winnipeg, Manitoba R3C 0J1

Dear Ed:

Policy Input to NERC Board of Trustees

The NERC Board of Trustees invites the Member Representatives Committee (MRC) to discuss and provide input on the following agenda items at its February 15, 2010 meeting, which board members will attend:

Infrastructure Security/Critical Infrastructure Protection (Agenda Item 7) — Mike Assante, NERC Vice President and Chief Security Officer, will present on a series of critical infrastructure security topics of particular interest to the board, which were highlighted as areas of high importance in Gerry Cauley's ERO vision statement that appears in agenda item 6. MRC member comments and suggestions on these topics will provide the board and new CEO with valuable stakeholder input on this important area of emphasis for NERC.

Action Plan for Developing Risk-Informed, Performance-Based Standards (Agenda Item 8) — At its November 5, 2009 meeting, the board endorsed the work of the ad hoc task force considering a risk-based approach to standards, encouraged the task force to continue its work, and asked for a further report at the February 2010 board of trustees meeting. The board is keenly interested in the MRC's reaction to this action plan.

MRC Input on Regional Delegation Agreement Revisions (Agenda Item 11) — NERC posted on January 29, 2010 for stakeholder comment the current working draft of a revised pro forma NERC–Regional Entity Delegation Agreement (RDA) and a summary of revisions being developed to the Compliance Monitoring and Enforcement Program (CMEP). NERC is providing the MRC sector representatives an opportunity to provide input on and discuss the work that has been done to date.

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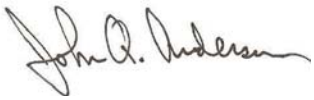
The board appreciates and values the open discussions at MRC meetings. To the extent that members of the committee can submit written comments in advance of the meeting on any or all of the above topics, it will further help the board. Written comments should be submitted to Dave Nevius, committee secretary (dave.nevius@nerc.net) by February 12, 2010 if possible.

Thank you,



John Q. Anderson
NERC Chairman
cc: Board of Trustees
Member Representatives Committee

Agenda Item 4
MRC Meeting
February 15, 2010

Election of Trustees

Action Required
Elect four Trustees

Background
Election of the trustees of the Corporation is governed by Sections 5 and 6 of Article III of the Bylaws. The details are provided in the attached report. Ken Peterson, chairman of the Nominating Committee, will present the report (**Attachment 1**).

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Agenda Item 4
Attachment 1

Report to Member Representatives Committee from Board of Trustees Nominating Committee

December 22, 2009

The Nominating Committee of the Board of Trustees for the North American Electric Reliability Corporation ("NERC") recommends the following four nominees for election to the NERC Board of Trustees at the Annual Meeting of the Member Representatives Committee on February 15, 2010:

Class of 2013 (three-year terms): **John Q. Anderson**
Vicky Bailey
Thomas W. Berry
David Goulding

This report includes a brief biography of each nominee.

Members of Nominating Committee

The Nominating Committee includes independent trustees Kenneth Peterson (Chair), Paul Barber, Janice Case, Jim Goodrich, Fred Gorbet, Bruce Scherr, and Jan Schori; as well as Member Representative Committee members Steve Naumann (Exelon and MRC Chairman), Ed Tymofichuk (Manitoba Hydro and MRC Vice Chairman), John A. Anderson (ELCON), Bill Gallagher (TAPS), and Jim Keller (Wisconsin Electric Power Co.).

Background

Article III of NERC's Bylaws establishes the qualifications and sets the nomination and election procedures for members of NERC's Board of Trustees. NERC's independent trustees serve staggered three-year terms, and an election of trustees occurs at the Annual Meeting of the Member Representatives Committee each year. All independent trustees shall be elected from nominees proposed by the Nominating Committee. A nominee shall be elected an independent trustee if such person receives the affirmative vote of two-thirds of the members of the Member Representatives Committee. Each nominee receiving the necessary two-thirds vote of the Member Representatives Committee shall take office immediately upon election.

At their respective August 4–5, 2009 meetings, the NERC Member Representatives Committee and the NERC Board of Trustees approved an amendment to NERC's bylaws that would give the Board of Trustees the authority to increase the number of independent trustees on the board from 10 to 11. The Federal Energy Regulatory Commission approved that amendment and made

it effective on October 14, 2009. On November 5, 2009, the NERC Board of Trustees adopted a resolution exercising the Board's authority under the amended bylaws and increased the number of independent trustees on the board from 10 to 11.

Committee Process

The Nominating Committee needed to present four nominees for election at the February 2010 MRC meeting — three for the positions whose terms expire at the 2010 meeting and one for the newly created position. The independent trustees whose terms expire at the 2010 annual meeting are John Q. Anderson, Thomas Berry, and Sharon Nelson. Ms. Nelson informed the committee that she does not wish to stand for re-election. The committee determined that Messrs. Anderson and Berry were willing and interested to serve an additional term. The committee made a preliminary determination to re-nominate Messrs. Anderson and Berry and retained the services of Spencer Stuart to assist in the search and evaluation of candidates to fill the remaining two positions.

As directed by the Bylaws, on August 27, 2009, the Nominating Committee provided an opportunity for stakeholders to suggest candidates for the board. The committee received many excellent suggestions and was pleased to have an excellent list of candidates to choose from. With the assistance of Spencer Stuart, the Nominating Committee reviewed the background of each candidate, screened the candidates for possible conflicts of interest, and interviewed a list of finalists.

The Nominating Committee unanimously recommends the four nominees submitted in this report for election to the NERC Board of Trustees for three-year terms ending at the February 2013 annual meeting of the Member Representatives Committee.

Trustee Succession

The Board of Trustees has adopted a policy statement on trustee succession, and the Nominating Committee has followed that policy in making the nominations. The policy statement directs the Nominating Committee to observe the following guidelines in proposing nominees to serve as independent trustees:

- Each year the Nominating Committee should include in its report to the Member Representatives Committee a calculation of the average tenure of the independent trustees. The Nominating Committee should endeavor to keep the average tenure of independent trustees below six years. [1]
- To the extent feasible, the Nominating Committee should determine prior to soliciting suggestions for candidates whether the committee expects that one or more incumbent trustees will not be re-nominated.
- No independent trustee may be re-nominated or reappointed after he or she has served on the board for twelve consecutive years, unless at least one year has elapsed between the end of service on the board and the subsequent re-nomination or reappointment.

[1] The calculations also include service on the board of the North American Electric Reliability Council.

As of February 2010, Messrs. Anderson and Berry will each have 11 years of service on the NERC board. Vicky Bailey and David Goulding are new to the NERC board. As of February 2010, with the addition of Ms. Bailey and Mr. Goulding as new trustees, the average tenure of all independent trustees will be 5.18 years.

Biographies of the Nominees

John Q. Anderson

John Q. Anderson is the current Chairman of the NERC Board of Trustees and Managing Director of Fenway Partners Resources, Inc., a private equity firm investing in transportation and logistics companies. Previously, he was a senior executive with CSX in Jacksonville and BNSF in Ft. Worth. In both companies he was senior executive in charge of the coal business and ran the overall sales and marketing effort. Prior to that, he was a partner with McKinsey & Company, where he worked for 13 years after receiving his undergraduate engineering degree from Stanford and his MBA from Harvard University. Mr. Anderson was first elected to the NERC Board of Trustees in 1999.

Vicky Bailey

Vicky Bailey is president of her own consultancy, Anderson Stratton Enterprises, LLC, and a principal of BHMM Energy Services, LLC, an energy facilities management group. In 2001, Ms. Bailey was appointed by President George W. Bush as Assistant Secretary for Policy and International Affairs, U.S. Department of Energy and in 1993, she was appointed by President Bill Clinton as Commissioner on the Federal Energy Regulatory Commission. Ms. Bailey also served multiple terms as a Commissioner on the Indiana Utility Regulatory Commission following successive appointments by Governors Bob Orr and Evan Bayh. Ms. Bailey currently is a corporate director of EQT and Cheniere Energy. Also, she is a member of the boards of Battelle Memorial Institute, Resources for the Future, and secretary of the United States Energy Association. Ms. Bailey is a Distinguished Alumni of the Krannert School of Management, Purdue University. This will be Ms. Bailey's first term on the NERC Board of Trustees.

Thomas W. Berry

Thomas W. Berry joined Goldman, Sachs & Co. in 1972 and became a general partner in 1986, where he had senior responsibilities for utilities and telecommunications companies. He became a limited partner in 1993 and a retired partner in 1998 when Goldman Sachs became a publicly traded company. Among various board positions, he was a founding director of the Red Oak Bank in New Jersey (which has been sold to another bank this year), a director of Provident Financial Services, Inc., a director of the Hyde and Watson Foundation, and a trustee of the Community Foundation of New Jersey. He is former Chairman of the Board of Kessler Rehabilitation Corporation and is a current trustee of Brown University, where he received his undergraduate degree. He received his MBA from Harvard University Graduate School of Business. Mr. Berry was first elected to the NERC Board of Trustees in 1999.

David Goulding

David Goulding is the current Chairman of the Northeast Power Coordinating Council and a regional representative on the NERC Member Representatives Committee.[2] A graduate of the University of Bradford U.K., his early years in the industry included progressive positions in transmission and generation construction, operations, and maintenance with the Central Electricity Generating Board. During this time he also worked on shift in a power system grid control center and was section head for computer support and operations planning. After joining Ontario Hydro in 1977, he held several senior positions including Director, Grid System Management; General Manager Electricity Exchange; Vice President, Central Market Operations; and Senior Vice President, Central Market Operations. Duties included directing the operation of generation and transmission facilities, fuel requirements and utilization, transactions with other utilities, and regulation of 313 municipal electric utilities. As Senior Vice President he was responsible for preparations for a competitive wholesale electricity market, compliance with market rules and the establishment of what is now the Ontario Independent Electricity System Operator (IESO). Mr. Goulding was appointed President and CEO of the IESO in early 1999, a position he held until retiring in late 2006. A past member of the NERC (Council) Stakeholder Board and NERC Stakeholder Committee, he was also the Canadian member on the CIGRE Study Committee on Electricity Markets and Regulation and a member of the Ministers' Electricity Conservation and Supply Task Force. He has post graduate qualifications in Advanced Power System Protection and attended the Banff School of Advanced Management. This will be Mr. Goulding's first term on the NERC Board.

[2] Mr. Goulding will resign his position with NPCC upon his election to the NERC Board of Trustees.

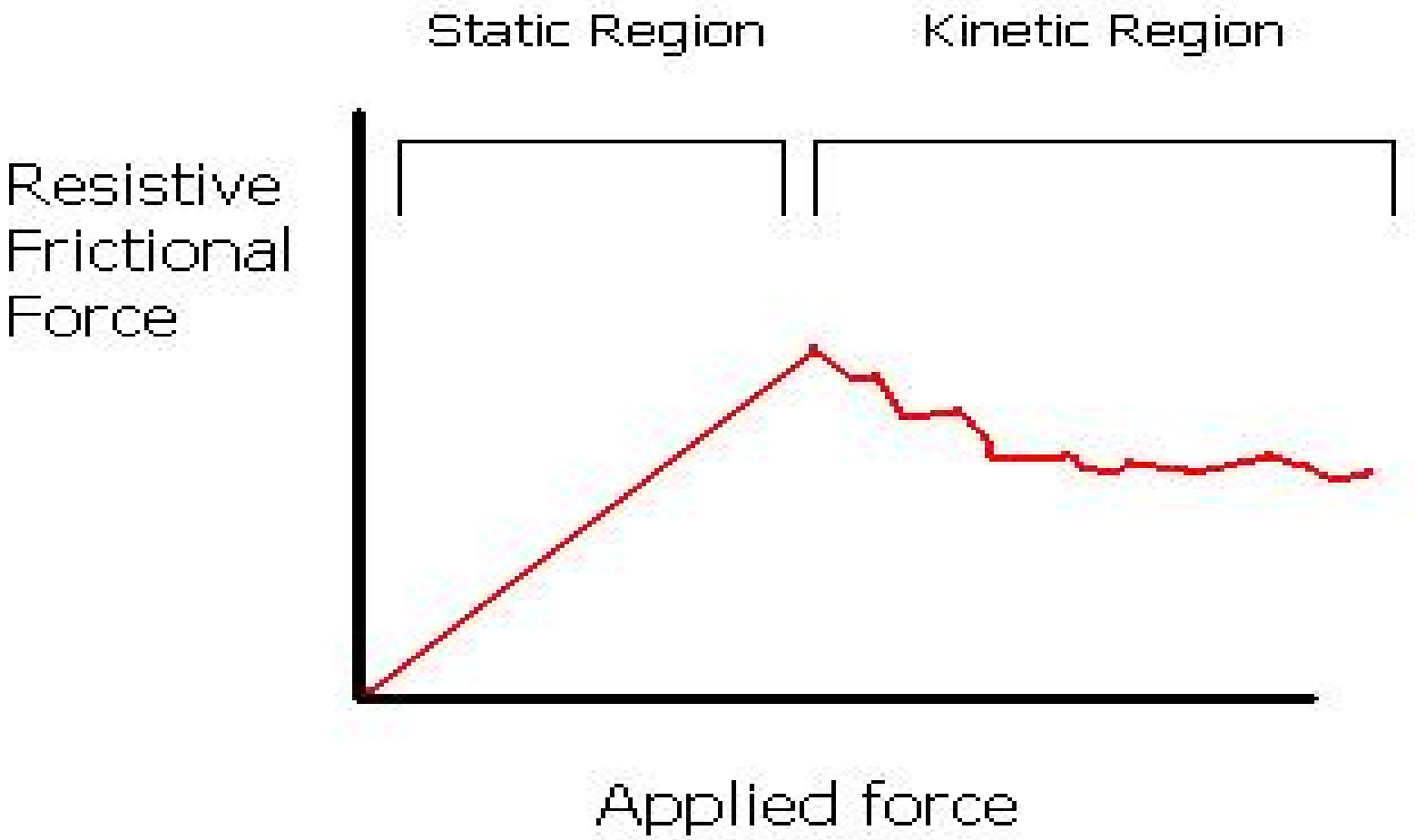
Comments by Outgoing Chairman

Steven T. Naumann

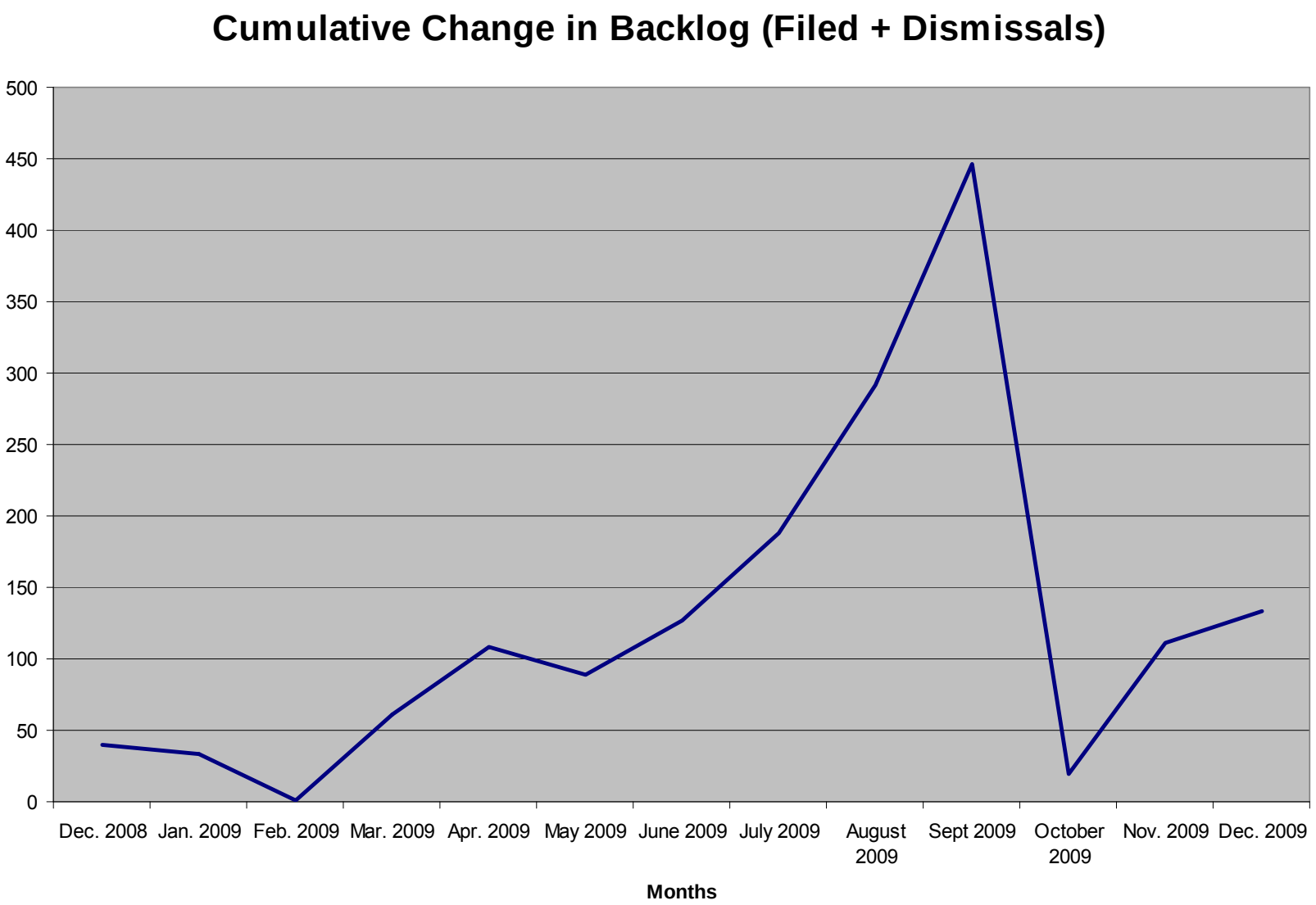
MRC Meeting

Feb. 15, 2010

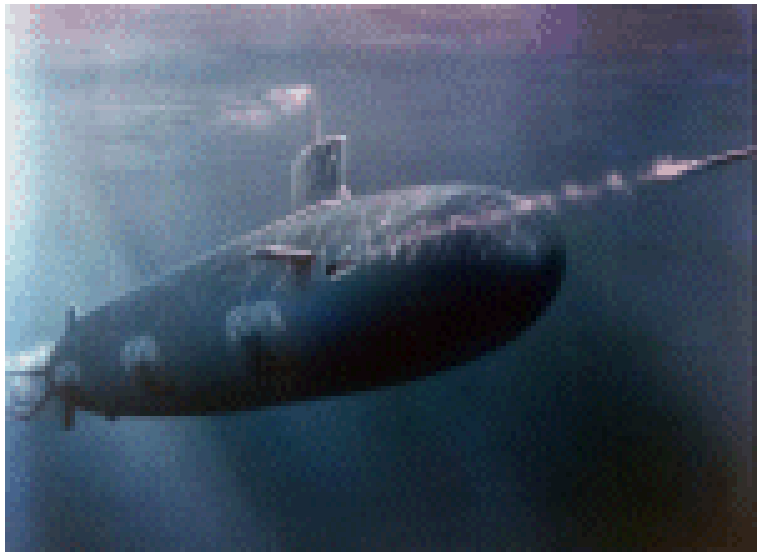
Overcoming Static Friction



Input – Output = Accumulation



Interpretations



Words In Standards Have Meaning

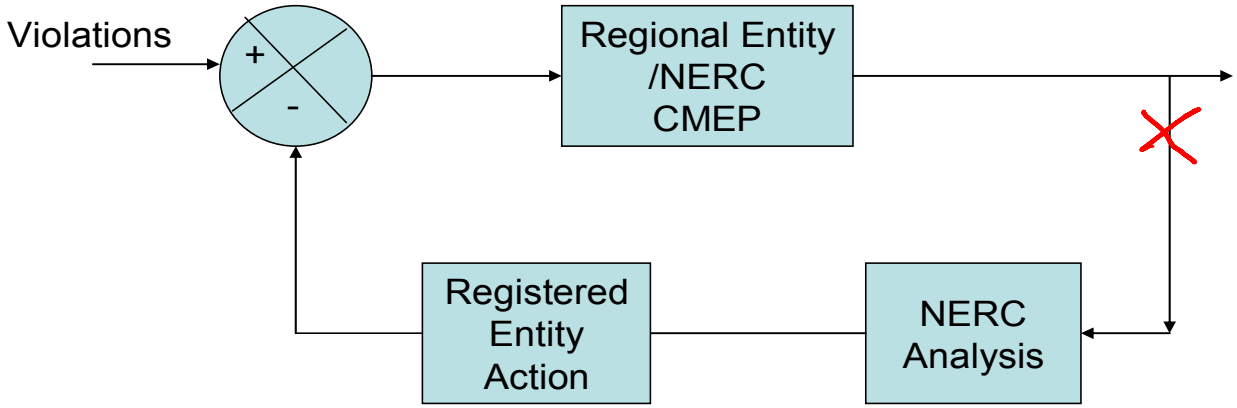
"operationally significant" lines

≠

"critical to the reliability of the Bulk Electric System"

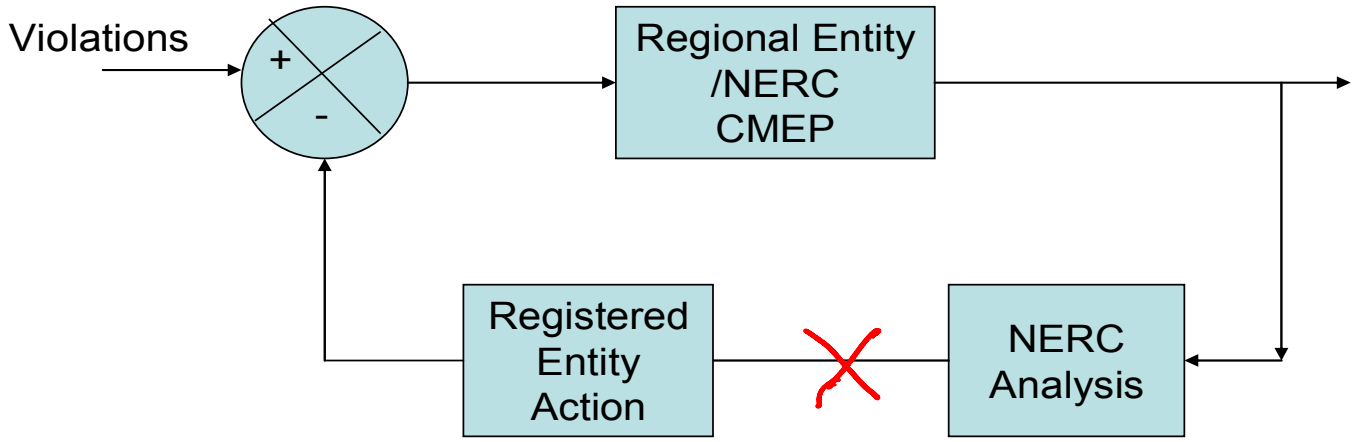
No Breaks in the Feedback Loop

Open Loop (No NERC/RE Feedback)



No Breaks in the Feedback Loop

Open Loop (No Registered Entity/Member Feedback)



NERC's Mission is Reliability

Gerry Cauley
President and CEO

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Effective Model for Self-Regulation of Bulk Power System Reliability
A Vision for the Electric Reliability Organization (ERO)

Vision

NERC will be the world's leading expert organization on bulk power system reliability risk management, will promote compliance excellence and enforce compliance with mandatory reliability standards, and will be a trusted leader and advocate in reliability matters.

Action Plan

1. Rebalance NERC's role as the self-regulatory ERO to deliver valuable contributions to bulk power system reliability while maintaining strong enforcement authority:
    a. Be a learning organization focused on improving reliability performance through event causal analysis, communication of lessons learned, and tracking of recommendations (INPO-like).
    b. Be a risk-informed organization, able to identify and understand reliability risks, help industry manage those risks, and effectively prioritize reliability initiatives.
    c. Promote a culture of reliability excellence and compliance with reliability standards.
    d. Be a recognized and trusted leader and advocate in reliability matters.
    e. Be a strong enforcement authority that is independent, without conflict of interest, objective and fair, and resolute in ensuring compliance with mandatory standards.
2. Build an ERO-wide enterprise based on effective integration and leveraging of regional and stakeholder ideas and expert resources with a common purpose of improving reliability.
3. Build constructive relationships with FERC, Congress, and other federal, state, and provincial authorities in the U.S. and Canada. Such relationships must be built through communicating expectations and consistently delivering responsive results that demonstrate effective mitigation of reliability risk.
4. Transition reliability standards to be results-based over a five-year period, with higher priority standards to be completed within two years and an initial sample standard to be completed within eight months. Modify the standards development procedure to streamline the development and approval process. Provide a more efficient process for clarifying the field application of reliability standards as a preference to the current formal interpretations process. Reestablish trust of the industry and government in the reliability standards process and foster industry leadership in developing excellent reliability standards. Develop formal feedback mechanisms from event analysis and compliance enforcement to continually improve reliability standards.

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5. Modify compliance procedures to promote greater process transparency to registered users and greater consistency in the determination of violations and penalties. Apply risk-informed approaches in the development of audit programs, compliance self-certifications, and spot checks. Establish alternative, streamlined procedures for minor, administrative violations. Promote a culture of compliance excellence through education, transparency, information, and incentives. Align NERC and regional compliance operations to be more complementary and less duplicative.
6. Develop a robust capability to conduct event analysis, using root cause and risk-based methods. Provide effective triage of events to ensure analysis is conducted and reviewed at the proper level. Working with industry, develop clear, bright-line criteria for the reporting and classification of system events. Incentivize rigorous self-evaluation of system events by registered entities. Ensure lessons learned are communicated to impacted parties in a timely manner. Refine the alerts program and develop a recommendations tracking capability to ensure accountability for reliability improvement actions.
7. Develop policy level goals and scope for the reasonable physical and cyber security protection of critical bulk power system assets. Facilitate a proactive action plan by industry that demonstrates effective mitigation of security risks, including safeguarding of assets, developing mitigation alternatives, and preparing and testing recovery plans. Establish minimum bright-line criteria for identification of critical bulk power system assets. Work closely with government to ensure availability of actionable information on security threats and promote synergies between government and industry security initiatives. Communicate the collective industry efforts to government and public.

What Can Industry Do?

1. Work through NERC to develop new CIP reliability standards that establish clear-bright line criteria for the identification of critical assets.
2. Lead the transition to results-based reliability standards and provide the industry's best experts to develop these standards.
3. Accept the due process tradeoffs associated with a more streamlined standards process.
4. Promote compliance excellence through rigorous self-evaluation and self-reporting of possible violations, and proactive remediation.
5. Work through NERC to develop clear criteria for reporting and analysis of system events for risk-based analysis.
6. Proactively analyze bulk power system events and implement improvement recommendations.
7. Promote NERC's risk-based and learning organization approaches with regulators.

CIP-002 Action Plan

Action Required
None

Background
On December 29, 2009, the Cyber Security Order 706 Standard Drafting Team posted for industry comment a revised version 4 of CIP-002 that dramatically alters the manner in which cyber assets are categorized and against which future security requirements will be applied. In the existing framework for CIP-002, responsible entities identify and document critical cyber assets associated with critical assets that support the reliable operation of the Bulk Power System (BPS) using a risk-based assessment methodology. Once identified as a critical cyber asset, the security requirements in CIP-003 through CIP-009 are applied.

In the proposed Version 4, the drafting team in conjunction with representatives from the NERC Operating and Planning Committees, developed criteria for evaluating the potential impact on functions critical to the reliable operation of the BPS, organized in high, medium, and low impact categories. Responsible entities apply the criteria to map their identified BPS generation or transmission subsystems or control centers to these impact categories. For each BPS cyber system associated with these subsystems or control centers, responsible entities assign the highest impact level as that of the associated BPS subsystem or control center. This categorization then serves as the basis for applying security requirements or controls commensurate with the potential impact those cyber systems have on BPS reliability.

This shift in approach moves NERC from a "one-size fits all" approach to cyber security application to one that is better aligned with a strategy of risk management, with the goal of prioritizing the protection of cyber systems based on their potential impact on the BPS and applying security controls appropriate to that potential impact. In essence, all such identified and categorized cyber systems will be afforded some level of cyber security protection under the new model.

The drafting team is utilizing an informal comment period to collect stakeholder input to this new approach. The comment period concludes on February 12, 2010. To enable stakeholders to directly discuss the proposal, NERC is also coordinating a Webinar on February 3, 2010 during which members of the drafting team will present in more detail the CIP-002 Version 4 proposal and entertain questions. The team hopes to post CIP-002-4 for a formal comment period thereafter with the objective to complete its development by June, 2010. In concert with this activity, the team is also developing the revised security requirements framework currently embodied in CIP-003 through CIP-009 to support the Version 4 CIP-002 approach. The target completion for this activity is year-end.

The ERO Intends to Conduct CIP Sufficiency Review
In accordance with the FERC directive that NERC review sufficiency of CIP-002 implementation in the determination of critical assets, the ERO plans to conduct a risk driven monitoring effort of current CIP-002 R2 sufficiency. NERC intends to launch a review process to evaluate the outcome from a sampling of entities in 2010.

Agenda Item 7.b.
MRC Meeting
February 15, 2010

Bulk Power System Critical Infrastructure Protection Policy Statement

Action Required
None

Background
NERC, with the input of the Electricity Sector Steering Group (ESSG), has drafted the Bulk Power System Critical Infrastructure Protection Policy Statement (**Attachment 1**) with intent to recommend for approval to the NERC Board of Trustees after opportunity for broad stakeholder comment and final review by the ESSG.

This board-level policy will set forth guidance on critical infrastructure protection, as well as response and restoration, and will serve to set expectations within NERC and its technical committees. The policy will also be used in communicating those expectations with government partners.

While this policy will not be enforceable, it will serve as a guide for NERC activities including potential standards setting. Actual implementation of the guidance set forth in this policy would be accomplished through the Critical Infrastructure Protection Committee (CIPC), NERC's CIP program, the Standards program, and other activities.

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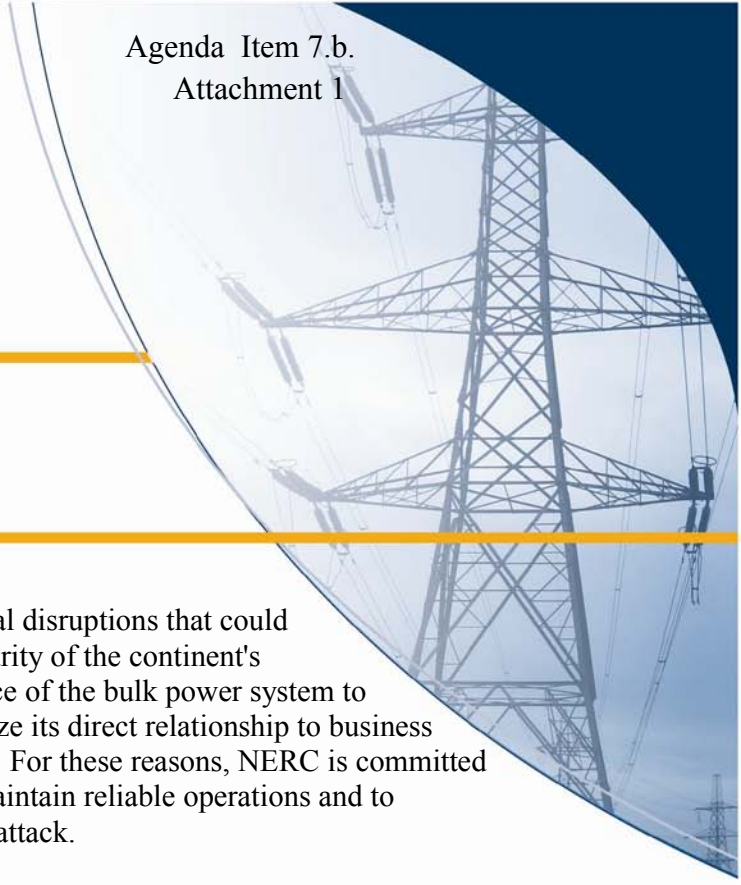

Bulk Power System Critical Infrastructure Protection Policy Statement

North American electric grids are not immune to intentional disruptions that could threaten the safety, economic well being, and national security of the continent's citizens. NERC and its members understand the importance of the bulk power system to the everyday lives of North Americans and further recognize its direct relationship to business productivity, public safety, and security of our homelands. For these reasons, NERC is committed to prioritizing and protecting critical assets necessary to maintain reliable operations and to enhancing the ability to quickly recover from a successful attack.

It is the policy of the North American Electric Reliability Corporation that the protection and recovery of critical electric infrastructure is essential to the adequate planning and reliable operation of the bulk power system in North America. This policy statement is intended to guide the electric industry's approach to the protection of this infrastructure, taking into account the importance of the bulk power system to our society, the diversity and nature of its assets, and the responsibility to prudently apply public and private investments.

A significant electric reliability concern is the potential for simultaneous impact to large portions of the bulk power system, from which restoration and recovery may be challenging and prolonged.

NERC and its members are committed to aligning current and future critical infrastructure protection efforts to minimize the risk of various cyber, physical, and blended scenarios from achieving these unacceptable outcomes:

Cyber Security — Potential for "hackers" to attack and/or infiltrate bulk power system control and operations systems, such that assets could be damaged or mis-used in sufficient scale to cause unacceptable outcomes.

Physical Security — Potential for an intelligent adversary to physically attack key nodes of the power grid in a coordinated fashion, critically disabling difficult to replace equipment in key substations or generating units that could have a cascading effect on the remainder of the system, making full restoration or operation of the system after the attack difficult or prolonged.

Other High Impact Threats — To include intentional use of electromagnetic phenomena and the potential for natural events, such as space weather or a severe pandemic illness, which could degrade the ability to reliably operate the bulk power system.

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Adequately addressing these challenges will require a mixture of:

Prevention and Detection — Developing appropriate controls and protections to increase the cost of an attack in terms of resources and risk to an attacker. This will include employing defense-in-depth strategies to add delay and assist in the identification of attacks requiring immediate evaluation on the power system.

Resilience — Strengthening inherent flexibility and capacity within the system that will reduce the risk that an attack or event will have unmitigated impacts on the system.

Response — Enhancing entity and system-wide responses to minimize attack consequences and bolster security throughout the remainder of the system. The security objective is to immediately contain equipment damage and position responders to disrupt ongoing or closely coordinated follow-on attacks.

Restoration — Ensuring plans are in place and ready to be executed to restore the system to reliable operation in the wake of a successful attack or event.

Desired Outcome

The expectation of this policy is the recognition that not all assets have the same protection priorities. This policy should help bulk power system entities set expectations, properly balance increased security investments and cost of service, and establish reasonable security protection goals.

Bulk power system entities will demonstrate the ability to effectively partner with the public sector to prepare for, and respond to, security risks capable of causing wide-area and/or long-duration system outages.

Transmission and Distribution Load Serving Entities are encouraged to work with electric customers that are essential for public safety and national security through commercial arrangements or appropriate agreements to protect connected facilities.

Agenda Item 7.c.
MRC Meeting
February 15, 2010

Aurora Vulnerability — Next Steps

Action Required
None

Background
On June 21, 2007, the ES-ISAC issued an advisory informing electricity sector entities of a potential vulnerability, now known as Aurora, which if exploited, could seriously damage rotating equipment such as motors, generators, pumps, and compressors connected to the electric power grid. Based on information available at that time, entities implemented mitigation measures they considered to be appropriate.

NERC also recognized the need to provide entities with more specific advice regarding the mitigation actions needed to properly address the vulnerability.

Although it was originally perceived as a cyber or remote access issue, we now know that Aurora is actually an exploitable window in protection that exists throughout the power grid; an unintended consequence of modern advances in materials and digital technology. Accidentally or intentionally exploiting this window enables damaging high-speed circuit breaker (or contactor) operations against certain types of motors and generators. The damage is caused by creating an "out-of-phase," or out-of-sync, condition when the breakers re-close, which in turn generates damaging torque and electrical stresses on the equipment as they are instantaneously forced back into synchronism.

A NERC ES-ISAC Advisory is being prepared to issue to all NERC Registered Entities to provide new and clarifying information regarding both the true nature of Aurora, and the full engineering details behind it. Associated with the advisory will be information about how to gain access to the detailed engineering documents that utilities will need to perform a thorough analysis.

The document library will consist of:

- An Aurora Utility Pre-assessment Facility Checklist — This document provides some limited background information and a checklist designed for facility managers at utilities or operators of utility facilities to determine if there are any electrical machines in their facility that may be susceptible to Aurora damage. Each utility should review their system for what may be an unacceptable loss of equipment and apply Aurora protection to meet their operating needs.
- A set of engineering documents dealing with transformers, generators, and motors.
- A Power Point slide deck that utilities can revise to meet their own outreach needs.

In light of the breadth and depth of this information, the advisory contains suggested actions that may not have been previously considered or implemented. Therefore, entities are strongly encouraged to review the entire technical package associated with this advisory, review actions they have taken thus far, and consider any additional actions that they deem necessary and prudent based on the new information.

Agenda Item 7.d.
MRC Meeting
February 15, 2010

Electricity Sector Coordinating Council Charter Revision

Action Required
None

Background
Sector Coordinating Councils, like the Electricity Sector Coordinating Council (ESCC), foster and facilitate the coordination of sector-wide activities and initiatives to improve the security of the nation's critical infrastructure. The Electricity Sector Steering Group (ESSG), by charter, provides strategic guidance to the ESCC. Currently, the ESCC does not have a specific charter but it is referred to only in the Critical Infrastructure Protection Committee (CIPC) charter.

The NERC Board of Trustees recently met and discussed the organization of the ESCC and the role of the ESSG. It is proposed that the ESSG consider the current organizational and governance construct of the ESCC and decide how to best represent the sector. The attached draft charter for the ESCC is being provided for discussion only at this point. The plan being considered would recommend to the NERC Board of Trustees retiring the ESSG in its current form and requests modification of the CIPC Charter to modify the existing references to the ESCC.

The current draft ESCC charter will be further evaluated based on discussions. The ESSG intends to formulate a recommendation after hearing comments at the February 2010 Member Representatives Committee and NERC Board of Trustee meeting in Phoenix.

Agenda Item 7.d.
Attachment 1

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Electricity Sector Coordinating Council

Charter

to ensure the reliability of the bulk power system

Approved by the Board of Trustees
Month XX, 20XX

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Table of Contents

Section 1. Name

Name
This organization shall be known as the Electricity Sector Coordinating Council abbreviated as "ESCC."

Section 2. Purpose and Scope

Purpose of the Electricity Sector Coordinating Council
The purpose of the ESCC is to foster and facilitate the coordination of sector-wide, policy-related activities and initiatives designed to improve the reliability and resilience of the electric sector, including physical and cyber security infrastructure.

The basis for this coordinated, sector council approach, via Homeland Security Presidential Directive-7 (HSPD-7), can be found in Annex 2. This approach is also the core approach of the Sector Partnership Frame Work Model of the National Infrastructure Protection Plan.

The ESCC represents the electric sector as described in the Energy Sector Specific Plan, which includes bulk power system entities defined by section 215 of the Federal Power Act. Responsibilities include, but are not limited to, the following:

1. Assisting in the explaining of electric sector Critical Infrastructure Protection (CIP) or Critical Infrastructure/Key Resources (CI/KR), as defined in the Homeland Security Act of 2002 and HSPD-7, expanded to include all elements of the bulk power systems for North America.
2. Coordination of the electric sector CIP (CI/KR) policy developments with other industry sectors.
3. Representing the electric sector within cross-sector/interdependency matters, and providing representation to such activities that include the ANSI Homeland Security Standards Panel, the Critical Infrastructure Partnership Advisory Council, National Infrastructure Advisory Council Working Groups, the Partnership for Critical Infrastructure Security, and the Industrial Control Systems Joint Working Group.
4. Improving equitable information sharing among and between the electric sector, sector members, government entities, and other industry sectors.
5. Reviewing of, and commenting on, CIP (CI/KR)-related plans and policies.
6. Coordination between and among the sector's policy-focused and operations-focused mechanisms, and the government with regard to:
    a. Development of sector recommendations for preparedness and incident response and recovery plans based on the experience of sector members.
    b. Participation in the development and sharing of best practices and lessons learned associated with CIP (CI/KR) activities or incidents.
    c. Identification of, or participation in, activities involving vulnerabilities, interdependencies, risk assessments, and risk management methodologies (including vulnerability remediation and policy enforcement) with respect to CIP (CI/KR).

7. Such additional purposes as the ESCC executive members may recommend consistent with the foregoing purposes.

Definition of the Electric Sector
The energy sector is comprised of two energy sector coordinating councils — one for electricity and one for oil and natural gas — and a government coordinating council (GCC) composed of members from all levels of government concerned with maintaining energy security. The electricity portion of the energy sector includes the generation, transmission, and distribution electricity assets.

Section 3. Membership

ESCC Membership
The ESCC is led by a chairman and a vice chairman and is comprised of executive members and associate members.

1. **Executive Members**
   The executive members of the ESCC are:
   a. One member from the NERC Board of Trustees appointed by the board chairman
   b. The NERC CEO
   c. Five CEO-level executives from NERC member organizations
   d. The chairman of the Critical Infrastructure Protection Committee (CIPC)

2. **Qualifications for the CEO-level Executives**
   a. Should hold the highest executive-level position at a NERC member entity that owns and/or operates electric industry assets.
   b. A background in electric industry operations is strongly preferred. In addition, experience with related assets, such as telecommunications, nuclear generation, hydroelectric dams, and oil and gas pipelines and distribution, will be helpful.

3. **Process to Select the CEO-level Executives**
   a. Annually, starting June 1, the NERC Member Representatives Committee (MRC) will accept nominations for three weeks ending June 21 (or the next business day), for qualified individuals to serve as executive members on the ESCC.
   b. Nominations should be e-mailed to the MRC chairman, MRC vice chairman, NERC CEO, and NERC staff secretary for the MRC.
   c. Nominations must include the candidate's name, title, entity affiliation, and a brief (one or two paragraph) statement describing how the nominee would contribute to the ESCC and meets the criteria contained in number Section 2, Item 4 below.
   d. The MRC chairman and vice chairman will review the nominees and assemble a proposed slate of candidates reflecting the qualifications set out in Section3, Item 2 above. The proposed slate will be submitted to the MRC for its approval. (All nominations will accompany the transmittal of the proposed slate to the MRC.)

e. The MRC approval may occur by conference call, e-mail vote, or at a regularly scheduled meeting in accordance with the NERC By-laws. If the MRC does not approve the proposed slate, the MRC chairman and vice chairman will submit revised slates until one is approved by the MRC.

f. If an insufficient pool of nominations has been received from which to populate an ESCC executive member slate that meets the selection criteria, the MRC chairman may reach out to MRC members for further assistance in identifying additional nominees.

4. Criteria for Selecting a Slate of CEO-level Executive Members

The MRC will consider the following criteria to select ESCC executive members that are broadly reflective of operating environments and business models that make up the electric industry.

a. Asset Type Diversity — ESCC executive membership should reflect a diversity of types of assets owned or operated, including transmission, distribution, and various types of generation.

b. Geographic Diversity — ESCC executive membership should reflect a broad geographic diversity, including international.

c. Business Model Diversity — ESCC executive membership should reflect ownership or operation of assets under diverse business models and regulatory requirements.

5. Terms of CEO-level Executive Members

The term for ESCC CEO-level executive members will be two years. They may be re-elected for subsequent terms. Consideration should be given to providing for overlapping terms in order to avoid replacing all five members in a given year if possible.

6. Resignations, Vacancies, and Nonparticipation

An ESCC CEO-level executive member who resigns before the end of their term may be replaced by appointment of the MRC chairman for the time remaining in the resigning executive's term.

7. Executive Member Functions

The executive members will perform the following functions:

a. Manage, with the assistance of NERC staff, the administrative and coordinating functions of the ESCC;

b. Represent the ESCC with regard to public and private interfaces;

c. Communicate decisions of the ESCC to external public and private entities;

d. Recommend the delegation of matters to working groups;

e. Recommend the creation of working groups and appoint initial working group chairmen. If a chairman is chosen from outside ESCC membership, an ESCC member will be the sponsor for the working group.

f. Plan meetings;

g. Ensure decision making is equitable and accessible to all sector stakeholders (e.g., by polling and/or communicating with members who were not available for deliberations);

h. Provide strategic direction to NERC in its role as the operator of the Electricity Sector Information Sharing and Analysis Center; and

i. Provide policy guidance to the U.S. Department of Energy as the government sector-specific agency under the sector partnership framework as defined by, but not limited to, the National Infrastructure Protection Plan.

8. Associate Members

a. Additional members of the NERC Critical Infrastructure Protection Committee's Executive Committee, not to exceed eight in number.

b. The ESCC secretary.

9. Associate Member Functions

Associate members will perform the following functions:

a. Provide subject matter expertise to executive members.

b. Be available to participate on working groups as requested to facilitate ESCC work product development.

c. Coordinate ESCC activities with NERC standing committees and other external entities.

Section 4. Governance

1. ESCC Officers

The ESCC is led by a chairman and vice chairman, and supported by a secretary. The affairs of the ESCC will be coordinated by the officers of the ESCC. Officers are:

a. The NERC Chief Executive Officer will serve as the chairman of the ESCC.

b. The ESCC vice chairman is selected from the MRC-selected executive members of the ESCC.

c. The ESCC secretary is designated as the NERC Chief Security Officer.

2. Vice Chairman Election

The vice chairman shall be elected by a majority (51 percent) vote of the executive members at a duly constituted ESCC meeting based on a nominations process. ESCC vice chairman participation shall not be vested in the member company or organization, but rather in the individual member.

3. Terms of Officers

a. The ESCC vice chairman shall serve a term of two years. If the vice chairman leaves the position before the end of the elected term, a special vote shall be held to elect an individual to fulfill the remainder of that term.

b. There are no term limits to serving as the vice chairman.

c. No two or more offices may be held by the same person.

4. Duties of Officers

a. The chairman and the other officers shall have such powers and duties as generally pertain to their respective offices, as well as such powers and duties as may be delegated to them from time to time by the executive members. The chairman, if present, shall preside over all meetings of the members.

b. The vice chairman shall act as chairman in the absence of the chairman.

c. The secretary shall have the responsibility of preparing (or having prepared) and maintaining custody of minutes of the executive members' and members' meetings and authenticating records of the ESCC.

Section 5. Meetings

1. Meetings of the ESCC

The full membership of the ESCC will meet no fewer than two times each year, and preferably once with the Energy GCC. Full ESCC meetings will be scheduled with every attempt to provide ample notice to members.

2. Quorum

A duly constituted meeting of the ESCC shall require a quorum of 60 percent of all active and eligible executive members. It will be at the discretion of the officers of the ESCC to ask for a vote of executive members only or a vote of the entire ESCC, in accordance with designated responsibilities. Members must be personally present (including telephonically) or notify the ESCC secretary of their intention to participate and vote by remote means, in advance of a properly noticed meeting at which a vote is taken.

The vote of a majority, to be cast by the executive members so present at a meeting in which a quorum is present, shall be necessary for the adoption of any matter voted upon by the executive members, unless a different proportion is required by this operating charter.

Proxies will be provided in writing to the ESCC Secretary ahead of any meeting that will include a vote.

Section 6. Working Groups and Special Committees

1. Working Groups

The ESCC shall form working groups as needed.

a. Working groups may be made up of any combination of ESCC member representatives and industry experts or other persons outside of the ESSC. Working group members will have an identified ESCC member as a sponsor.

b. ESCC members may join working groups without limit.

c. Members will appoint working group chairmen and establish procedures consistent with this charter for the operation of the working group.

d. Working group meetings may be held depending on need.

e. Working groups will develop and send reports and recommendations to executive members for approval. Reports and recommendations from working groups will be presented at full ESCC meetings for executive member approval as appropriate, unless special conditions warrant.

2. Working Group Chairman
A chairman for each working group will be chosen by the executive members to take responsibility for coordinating the group, leading working group meetings, and communicating with the full ESCC.

3. Experts
A working group may call upon ESCC member and non-member participants to assist in its efforts.

Section 7. Parliamentary Authority

Parliamentary Authority
Conduct of the affairs of the ESCC shall follow the rules contained in the current (10^{th}) edition of *Robert's Rules of Order* in all cases in which they are applicable and in which they are not inconsistent with this operating charter or any special rules of order the ESCC may adopt.

Section 8. Amendments

Amendment of this Document
This document may be amended upon two-thirds majority vote of the ESCC members in a regular meeting, or in a properly noticed special meeting constituted for the purpose. Changes so approved would become effective upon approval by the NERC Board of Trustees.

Agenda Item 7.e.
MRC Meeting
February 15, 2010

NRC-NERC Memorandum of Understanding Implementation Plan

Action Required
None

Background
On January 19, 2010, NERC filed a response to the December 17, 2009 FERC order requiring the submittal of additional information regarding plans and schedule for nuclear power plant generator owners and operators to come into compliance with version 1 of the CIP standards. FERC also required in this order that NERC schedule the implementation of version 2 of the CIP standards by nuclear power plants according to the same schedule established for version 1.

The FERC requirement for the filing was very short directing NERC to make a compliance filing within thirty days describing the scope of systems determination and exemptions process, specifically addressing the following:

- The anticipated date the scope of systems determination framework will be finalized;
- The status of the development of the exemption process;
- Whether the exemption process will include: (i) an application deadline and (ii) a deadline for a determination on an exemption request; and
- A description of any other time parameters that may be included in the exemption process.

NERC identified in its filing two critical path items that determine the compliance schedule for nuclear power plants. These are:

1) FERC's effective date of the implementation plan; and
2) The "exemption process" (also referred to as the "scope of systems determination process") that FERC directed NERC to develop.

In order to support the management of this implementation plan, NERC also created a project management plan. This plan lays out the resourcing requirements and schedule for the entire NERC Bright Line Determination project. A high level Gantt chart (**Attachment 1**) was included in the NERC filing.

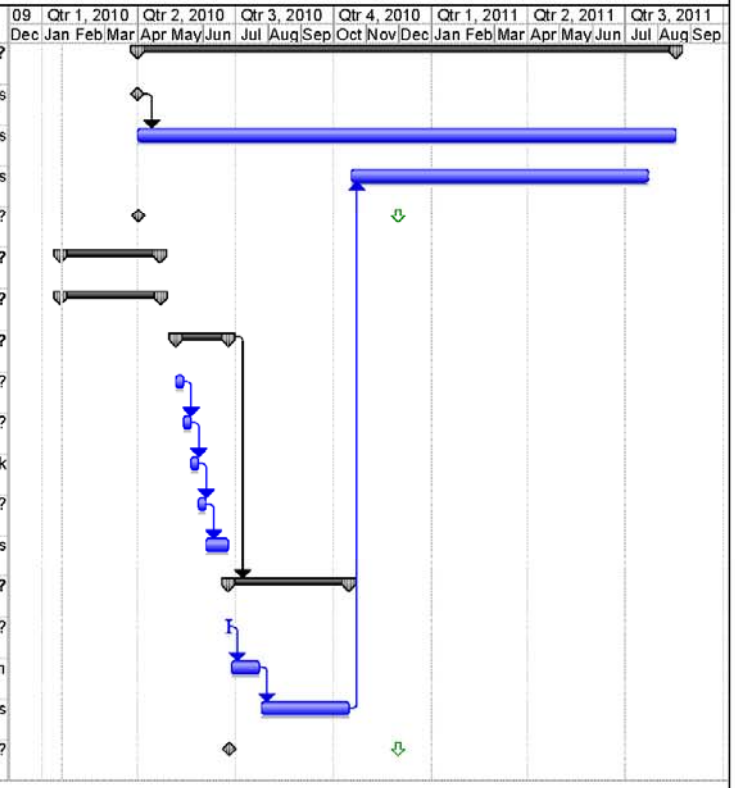
The general approach to the NERC efforts includes:

- Developing a Bright Line Survey document for entities to use in determining which Systems Structures and Components (SSCs) they wish to exclude from NERC CIP;
- Developing workshop materials such as lesson plans and training support materials;
- Holding four industry workshops to present the bright line drafts and solicit industry feed back; and
- Finalizing entity bright line documents.

The present plan dates are all dependent on the FERC effective date which, will be the date that FERC approves the NERC implementation plan.

NERC Bright Line Determination
Project Time Line

ID	Task Name	Duration
1	**FERC Effective Date - (Notionally Assume April 1, 2010)**	**360 days?**
2	FERC Effective date - R	0 days
3	Milestone for R+18	18 mons
4	Milestone for S+10 - Tied to completion of Bright Lines	10 mons
5	S+10 latest determination	1 day?
6	**Task BL1 - Develop workshop materials for "Bright Line" determinations**	**67 days?**
19	**Task BL2 - Develop workshop schedules for Bright Line**	**68 days?**
24	**Task BL3 - Hold Nuclear Entity Bright Line workshops**	**35 days?**
25	Nuclear Entity Workshop - Region II Atlanta	1 wk?
26	Nuclear Entity Workshop - Region IV Arlington TX	1 wk?
27	Nuclear Entity Workshop - Region I Philadelphia	1 wk
28	Nuclear Entity Workshop - Region III Chicago	1 wk?
29	Post workshop Survey revisions	3 wks
30	**Task BL4 - NERC Bright line Documentation process**	**81 days?**
31	Distribute the survey	1 day?
32	Utility completes the survey	1 mon
33	NERC and NRC review and accept the revised Bright Line survey	3 mons
34	S+10 latest determination for completion BL4	1 day?



Project: Nuclear Bright line efforts
Date: Tue 1/19/10

Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone
Rolled Up Progress
Split
External Tasks
Project Summary
Group By Summary
Deadline

Action Plan for Developing Risk-Informed, Performance-Based Standards

Action Required
None

Background
In the Three-Year ERO Performance Assessment, stakeholders recommend that NERC should: (i) focus existing reliability standards and the development of new reliability standards on those that will lead to the greatest improvement in reliability; i.e., address the greatest risks of wide-area cascading outages; (ii) reduce the number of existing reliability standards to just those that have a critical impact on reliability of the bulk power system and convert the remaining reliability standards to guidelines; and (iii) develop a more systematic process for prioritizing new reliability standards development projects based on risks to the bulk power system.

In the Assessment, NERC acknowledged these stakeholder comments and committed to resolving the issues by: (i) addressing quality issues to ensure each reliability standard has a clear statement of purpose, and has outcome-focused requirements that are clear and measurable; and (ii) eliminating requirements that do not have an impact on bulk power system reliability.

An ad hoc team representing industry, NERC, and regional entity staffs (**Exhibit A**) was formed to develop recommendations to ensure that NERC's reliability standards can have the greatest possible positive effect on the reliability of the bulk power system.

The team outlined a guiding set of principles based on performance and risk-based methods and presented specific recommendations (**Exhibit B**) for improving the development and format of reliability standards. Those recommendations were endorsed by the NERC Board of Trustees at its November 5, 2009 meeting.

To achieve an adequate level of reliability, the team recommended a blended approach be used comprising of three types of requirements is needed:

- **Performance-based** — defines a particular reliability objective or outcome to be achieved. In its simplest form, a performance-based standard has four components: *who, under what conditions (if any), shall perform what action, to achieve what particular result or outcome*?
- **Risk-based** — preventive requirements to reduce the risks of failure to acceptable levels. A risk-based reliability standard should be framed as: *who, under what conditions (if any), shall perform what action, to achieve what particular result or outcome <u>that reduces a stated risk to the reliability of the bulk power system</u>?*
- **Competency-based** — defines a minimum set of capabilities an entity needs to have to demonstrate it is able to perform its designated reliability functions.

A defense-in-depth strategy for reliability standards should recognize that each requirement in the NERC standards has a role in preventing system failures, and that these roles are complementary and reinforcing. Reliability standards should not be viewed as a body of unrelated requirements, but rather should be viewed as part of a coordinated portfolio of requirements designed to achieve an overall defense-in-depth strategy.

Major Accomplishments since November Board Meeting

a. Communications Plan

The ad hoc Team enlisted the assistance of the NERC Standards Committee Communications and Planning Subcommittee to develop a communications plan for the results-based reliability standards initiative. The communications plan was approved by the Standards Committee on January 14, 2010 (**Exhibit C**).

The purpose of the communications plan is to inform and educate NERC stakeholders about the results-based reliability standards initiative, and promote input and participation. The approved scope and objectives of the communication plan include:

a. Obtain stakeholder (industry and government) buy-in by communicating the importance of the initiative, which includes:
   i. Communicating the benefits to reliability, and
   ii. justifying the allocation of resources;
b. Ensure key audiences (FERC, trade groups, NERC committees) are kept abreast of the drafting team's plans, successes, and challenges;
c. Prepare industry stakeholders, in particular the Registered Ballot Body, to respond promptly and fully to requests for comment and ballots by providing adequate information about drafting team discussions and decisions as they occur; and
d. Create a feedback clearinghouse to determine information gaps and develop FAQs.

b. Scorecard Completion

One of the initial activities of the ad hoc team was the evaluation of the BOT-approved NERC reliability requirements based on the results-based concepts. From this evaluation, the team developed a "scorecard" for each of the approved requirements. The team reported the preliminary results of this effort to the Board in November, 2009. Since the November Board meeting, the ad hoc team has thoroughly reviewed the preliminary results and revised them for consistent scoring across the entire set of requirements. The revised scorecard results will be used for:

a. *Standard Development Priorities*: as a reference document to help the Standards Committee and industry stakeholders prioritize standards in greatest need of improvement.
b. *Requirement Revision Priorities*: as a reference for standard drafting teams to help them identify requirements that need the most attention and point them toward a results-based focus.
c. *Compliance Monitoring Priorities*: to share the final results with the NERC Compliance program to inform them of possible priorities for audit and enforcement.

c. Proof of Concept — Standards Committee Approval and Implementation

The ad hoc team was tasked with recommending a set of reliability standards for a near-term proof of concept demonstration of the results-based approach to reliability standards development. The goal was to identify reliability standards in most need of revision that may have the greatest possible positive effect on the reliability of the bulk power system. The resultant standard and associated requirements should:

- Strive to achieve a portfolio of performance, risk, and competency-based mandatory reliability requirements that provide an effective defense-in-depth strategy for achieving an adequate level of reliability of the bulk power system.
- Identify a clear and measurable expected outcome, such as: (i) a stated level of reliability performance, (ii) a reduction in a specified reliability risk, or (iii) a necessary competency.
- Be structured in the form of who, under what conditions (if any), shall perform what action, to achieve what particular result or outcome (that reduces a stated risk to the reliability of the bulk power system).

On January 14, 2010, the Standards Committee approved the ad hoc team's recommendation to use Project 2007-07 — Vegetation Management as the prototype for the first proof of concept for developing a results-based standard. The Standards Committee also directed the standard drafting team to propose an expedited development schedule with a target for final industry ballot by August 31, 2010 (**Exhibit D**).

d. Consulting Firm Hired

NERC has contracted with Compliance Automation Inc. to work with the ad hoc team and the standard drafting team for Project 2007-07 — Vegetation Management to convert the draft FAC-003-2 Transmission Vegetation Management Program reliability standard using results-based criteria. Compliance Automation Inc. specializes in requirement gathering, requirement writing, and requirement management.

Upcoming Milestones and Estimated Completion Dates

The ad hoc team developed an aggressive schedule for transitioning the ownership of the Results-based Reliability Standards Initiative to the Standards Committee (**Exhibit E**). This plan includes, among other things:

1. With Standards Committee approval, engage selected additional drafting team(s) and, in consultation with those team(s), guide and expedite the drafting of results-based standard(s);
2. Develop a training/orientation program for drafting teams and job aids (including criteria) to guide development of results-based standards;
3. Develop a road map for prioritized development of results-based standards and incorporate the road map more fully into the three-year Reliability Standards Development Plan and;
4. Work with Standards Committee to institutionalize the results-based approach and to carry out an expanded role in managing quality and timeliness of ongoing and future standards projects.

Elements Necessary for Success

The ad hoc team identified the following issues as necessary for the successful implementation of the results-based reliability standards initiative moving forward:

1. Effective implementation of the Results-Based Standards communications plan.
2. Consistent progress on the proof-of-concept through hands-on work with the standard drafting team for Project 2007-07 — Vegetation Management.
3. Development and posting of completed Results-based Reliability Standards criteria and training materials that show clear expectations for the “before” and “after” differences in reliability requirements.
4. Staged development support and guidance to several additional standard drafting teams. This is intended to be initiated in mid-2010 to demonstrate that high quality results-based standards can be successfully developed in the normal course of standards development, without extensive hands-on support.
5. Coordination between the Standards Committee and NERC staff regarding a programmatic approach to assessment of ongoing and proposed projects based on Results-Based Standards principles and other quality criteria.

EXHIBIT A — Ad hoc Group on Results-Based Reliability Standards

Gerry Adamski, NERC
Terry Bilke*, Midwest ISO
Roman Carter, NERC
Gerry Cauley, NERC
Carter Edge, SERC Reliability Corporation
Michael Gildea*, Dominion Resources Services, Inc.
Chris Hajovsky, RRI Energy, Inc.
Pete Heidrich, Florida Reliability Coordinating Council
Pat Huntley, SERC Reliability Corporation
Ben Li*, Consultant – (formerly IESO)
Allen Mosher*, American Public Power Association
Darrell Piatt, FERC (Observer)
Raj Rana*, AEP
Eric Rollison, NERC
Steve Rueckert*, Western Electricity Coordinating Council
Marty Sidor, NERC
David Taylor, NERC
Harry Tom, NERC
Guy Zito, NPCC

* Members of NERC Standards Committee

EXHIBIT B — Ad hoc Group's November 4, 2009 Recommendations to the NERC Board of Trustees for Improving the Development and Format of Reliability Standards

1. Strive to achieve a portfolio of performance, risk, and competency-based mandatory reliability requirements that provide an effective defense-in-depth strategy for achieving adequate reliability of the bulk power system.
2. Each requirement in the standards should identify a clear and measurable expected outcome, such as: (i) a stated level of reliability performance, (ii) a reduction in a specified reliability risk, or (iii) a necessary competency.
3. Each requirement in the standards should be structured in the form of *who, under what conditions (if any), shall perform what action, to achieve what particular result or outcome (that reduces a stated risk to the reliability of the bulk power system).*
4. Provide instructions, training, and job aids to drafting teams to reinforce the results-based approach and structuring of requirements in this manner. (There currently exists a wide spectrum on what the next version of these results-based standards will look like and hence examples need to be developed.)
5. Provide the evaluation tool and criteria developed in this project to drafting teams and encourage use of the four questions outlined in Exhibit D (November 4, 2009 MRC Agenda Item 7) throughout the drafting and commenting process.
6. Strive to minimize prescriptive, administrative (document something), and commercial requirements within the reliability standards.
7. Reduce the number of sub-requirements by incorporating essential components into the main body of the requirement statement for the purpose of reducing the compliance administration burden of numerous separate sub-requirements.
8. Provide increased focus in describing the applicability of each requirement by identifying not only the specific functional entities, but also any specific assets and conditions to which the requirement should apply to achieve the necessary reliability objective.
9. Provide active participation of compliance personnel in the development of standards to ensure performance requirements can be effectively measured in the field.
10. Evaluate the current three-year standards development plan and adjust priorities going forward to achieve the most reliability benefit using the principles outlined in this report.
11. Modify the standard template to distinguish elements that are mandatory for registered entities from elements that are informational or used to administer compliance (a sample template for a reliability standard is provided in Exhibit C of November 4, 2009 MRC Agenda Item 7).
    a. Mandatory and enforceable sections of the standard should include: (i) applicability, (ii) performance requirements, (iii) measures, and (iv) data/record retention (plus any regional variations if applicable).
    b. Informational sections for the administration and application of the standards should include: (i) compliance administration information, (ii) procedures, and (iii) guidelines or supporting information.
12. Revise the Standards Committee charter to clearly indicate that the committee is responsible not only for the integrity of the standards process, but also the essential quality attributes of the reliability standards in accordance with the ERO Rules of Procedure, as guided by the

results-based principles outlined in this report, and without prejudice regarding the specific content of each standard.

13. In the longer-term, NERC should develop a robust standards information management system based on relational database methods.

Communications Plan for Results-Based Standards Initiative

Background

In November 2009, the NERC Board of Trustees approved a plan to improve the set of NERC reliability standards by making them more focused on reliability performance. This initiative, known as the "Results-Based Standards Initiative," aims to develop recommendations to ensure that NERC's reliability standards can have the greatest possible positive effect on the reliability of the bulk power system. An ad hoc group working on the project has outlined a guiding set of principles based on performance and risk-based methods and has presented specific recommendations for improving the development and format of reliability standards.

Mission

Inform and educate reliability stakeholders about the Results-Based Reliability Standards Initiative, and promote input and participation from reliability stakeholders.

Scope/Objectives

1. Obtain stakeholder (industry and government) buy-in by communicating importance of initiative:
    a. communicate benefits to reliability
    b. justify allocation of resources
2. Ensure key audiences (FERC, trade groups, and NERC committees) are kept abreast of the drafting team's plans, successes, and challenges.
3. Prepare industry stakeholders, in particular the Registered Ballot Body, to respond promptly and fully to requests for comment and ballots by providing adequate information about drafting team discussions and decisions as they occur.
4. Create a feedback clearinghouse to determine information gaps and develop FAQs.

Audience

- All NERC registered entities
- NERC standards, compliance, and other relevant staff (e.g., Standard Coordinators, Compliance Registry, Enforcement, etc.)
- NERC Standing Committees and relevant taskforces, ad hoc groups, subcommittees, and contractors (e.g., Operating Committee, Planning Committee, CIPC, Standard Drafting Teams)
- Regional Entity staff and committees (e.g., equivalent of NERC Standards Committee)
- Regional Entity Management Group
- FERC Commissioners, Office of Electric Reliability staff, and Office of Enforcement staff

- Industry executives (senior managers and CEOs)
- Line employees, subject matter experts, and members of standard drafting teams
- Trade associations (EEI, APPA, NRECA, EPSA, ELCON, CEA, NARUC)
- NERC drafting team coordinators, including contractors
- State and Provincial Governmental Agencies

Topics

Concepts	• core components of a results-based standard • process used to identify three standards for this results-based pilot • pilot test history (why those standards)
Benefits and importance	• positive impact on overall reliability of the grid (helps to give some data) • benefits to stakeholders for meeting compliance requirements • what measure(s) will define success of the pilot
Resources (industry experts needed)	• what resources are needed (what SME backgrounds) • when and for how long *especially important to executives so they can decide whether other things can be moved or deferred because employees are working on this project*
Timeline	• stages of the program and anticipated timelines ▪ e.g., NERC Board asked that pilot test be undertaken as quickly as possible with three standards completed and implemented in 2010 • plans for implementation of lessons learned in this pilot on remaining standards in 2011 and beyond
Impact on process	• what will be different in the drafting, reviewing, and balloting process for these three pilots as opposed to all other standards in the developmental pipeline in 2010 (maybe table of similarities and differences) • leadership role of consultant until stakeholders adapt to new drafting model (will take time and practice to learn) • inter-drafting team communication (who's doing what); important to target confusion and support coordination of possible overlaps • status/impact of standards current currently undergoing drafting by industry members or sitting in the pipeline scheduled to start in 2010 (before this pilot got started)
Information sources	• where stakeholders can get further information as project proceeds in 2010 • provide a place for feedback: e.g., issues and concerns can go to the Standards Committee since it will oversee this pilot in coordination with NERC staff • provide access to message packages as they are available (especially for trade groups)

Delivery Methods

e-mail	• use distribution lists to ensure full coverage (NERC, Regional Entities, etc.) • use Regional Entity distribution lists to reach targeted personnel
Webinars	• record and "distribute/make available" for those who cannot attend • include feedback option (on demand after structured presentation/Webinar)
Committee meetings (NERC, Regional)	• attend meetings and communicate message • request special call if necessary for briefing
NERC Web site	• centralized place; linked from Regional Entity sites • headline news, big button on home page (similar to "Renewables"), pop-up page, project page, standards under development, and other frequently hit pages
Structured conference calls and/or meetings	• for standards drafting team reps and NERC coordinators, including contractors; ensure participation from all teams
Face-to-face outreach	• ex. trade groups, FERC commissioners and staff, committees • high-level involvement from NERC
"Canned messages"	• slides and presentations (project information – overview, etc.) • files accessible via Web site and possible in-person delivery of recorded message
Press releases	
Newsletters	• NERC News; Regional Entity newsletters?
Workshops	• Agenda item on existing regional workshops (e.g., compliance workshops; SERC has one in mid-March) • NERC Standards workshop (Spring 2010?)
Regional Entity management group meetings/calls	• Group holds weekly (Friday) conference calls and meets face-to-face prior to certain high-level meetings – standing committees, BOT • Ask Regional Entity Mangers to discuss the initiative at various conferences they attend to relay the message and gain additional support from stakeholders

Delivery Plan/Timeline

Historical Tactics:
The ad hoc group has been examining the means by which reliability standards could be rewritten with a results-based orientation. (July – November 2009) The group has presented its findings:

- NERC standing committees (September 15, 2009)
- Standards development plan webinar (September 17, 2009)
- NERC standards workshop (October 15, 2009)

- NERC Board of Trustees and Member Representatives Committee (November 4–5, 2009) — NERC Board gave full support to the project and requested ad hoc team work with NERC staff, the NERC Standards Committee, and other stakeholders to bring the plan to fruition as expeditiously as possible.

Planned Tactics:

Date	Tactic	Audience	Content Developer(s)	Presenter/Delivery
Early January 2010	Conduct conference call to outreach to trade associations (will use slides from original plan)	Trade associations	Allen Mosher (with support from SCCPS)	Allen Mosher
January 14, 2010	Submit communications plan for endorsement	Standards Committee/NERC Senior Management	SCCPS	Raj Rana, Michael Gildea
End of January 2010	Solicit endorsement of staffing and budget allocation to undertake project in 2010	NERC Board	Dave Taylor, Gerry Adamski	Gerry Adamski
End of January 2010	Create web page for high-level updates (with links from home page and standards pages)	Industry/FERC	Shaun Streeter, Carl Dombek, SCCPS subteam	NERC staff (Dave Taylor)
End of January 2010	Develop talking points and core messages that would be used in various levels of detail for all communications	All	Project 2010-06 members, SCCPS members, NERC staff (Carl Dombek), NERC regional communications group	Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)
End of January 2010	Develop press release • scope and timeline • core messages • talking points	All	Carl Dombek, Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)	Carl Dombek
Early February 2010	Distribute press release announcing project (to NERC exploders; send material to Regional Entities for customized distribution)	Industry	Carl Dombek	Carl Dombek

Date	Tactic	Audience	Content Developer(s)	Presenter/Delivery
Early February 2010	Develop a NERC address for stakeholder to submit questions	All	Shaun Streeter, Carl Dombek	Shaun Streeter, Carl Dombek
Early February 2010	Hold targeted conference calls to explain process and anticipated schedule	drafting teams selected to work on results-based standards	Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)	Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)
February 2010	Conduct conference call(s) and e-mail messaging on expectations – separate above activity since message focus will be different	All drafting team chairs, vice chairs, coordinators	Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)	Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)
February 2010	Provide project status update	NERC Board	Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)	Chris Hajovsky (with Allen Mosher, Gerry Adamski, or Dave Taylor attending)
Monthly	Distribute any updated materials for use in regional forums (outlined in more detail in regional contact list created by SCCPS)	Regional Entities	SCCPS subteam, Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)	Regional contacts (SCCPS contact list)
Mid-February 2010	Announce NERC-sponsored Webinar	Industry	Carl Dombek, Shaun Streeter	Carl Dombek, Shaun Streeter
Early March 2010	Conduct (and record) Webinar held on subject Solicit feedback during Webinar	Industry	SCCPS subteam, Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)	Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs), Carl Dombek
Early March 2010	Provide individual briefings on anticipated process and schedule	electric trade associations, FERC Reliability Office	Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs), Allen Mosher,	Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs), Allen Mosher,

Date	Tactic	Audience	Content Developer(s)	Presenter/Delivery
	Obtain feedback		Gerry Adamski	Gerry Adamski
As necessary	Request topic to be included on Regional Managers' weekly conference calls (regional call and/or NERC/regional call)	Regional Entities	SCCPS subteam, Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)	SCCPS subteam, Julie Blair (current call coordinator), Gerry Adamski
	Develop a frequently asked questions document for Web page	All	SCCPS subteam, Shaun Streeter, Carl Dombek, Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs), drafting teams working on result-based projects	Shaun Streeter, Carl Dombek
Early March 2010	Request and collect status of draft standards	drafting teams working on results-based standards	Dave Taylor	Dave Taylor
Early March 2010 (then on regular basis)	Distribute status of draft standards • meeting agenda topics, such as reports to Standards Committee • NERC Newsletters • dedicated NERC Web page (monthly) • e-mail lists (ex. Regional Entities)	Industry, Standards Committee (primary), and NERC Management, Regional Entities	Dave Taylor, Shaun Streeter, drafting teams working on results-based standards	Shaun Streeter, Maureen Long, Carl Dombek
April 2010 (or about 3 months after project	Host advanced scheduled conference call to review what's working with program roll-out and make	SCCPS, Regional Contacts, and NERC staff involved program	Raj Rana, Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)	Raj Rana, Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)

Date	Tactic	Audience	Content Developer(s)	Presenter/Delivery
approval)	adjustments, including communications efforts.	implementation		
May 2010	Provide drafting team status report to NERC MRC at May meeting (include assessment of ability to meet targets)	Industry	Dave Taylor	Gerry Adamski, Allen Mosher
May 2010	Provide project status update	NERC Board	Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)	Chris Hajovsky (with Allen Mosher, Gerry Adamski, or Dave Taylor attending)
As standards are ready	Announce comment periods, pre-ballot reviews, and ballots	Industry	Shaun Streeter	Shaun Streeter, Lauren Koller
June/July 2010	Announce NERC-sponsored Webinar	Industry	Carl Dombek, Shaun Streeter	Carl Dombek, Shaun Streeter
June/July 2010	Conduct (and record) Webinar for status, Q&A that has surfaced as result of project implementation, successes, and challenges Solicit feedback during Webinar	Industry	SCCPS subteam, Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs)	Dave Taylor and Chris Hajovsky (Project 2010-06 co-chairs), Carl Dombek
June/July 2010	Review efforts conducted through June and draft plan for remainder of year			

EXHIBIT D — Ad hoc Team's Recommendation for Proof-of-Concept Demonstration Project

Results-based Reliability Standards Proof-of-Concept Demonstration Candidates

Issue: A sub-team of the *ad hoc* group of industry participants established for developing a plan for implementing Project 2010-06 Results-Based Reliability Standards (as defined in the Reliability Standards Development Plan: 2010–2012) has been tasked with recommending a set of reliability standards for a near-term proof of concept demonstration of results-based standards.

Purpose: Results-based quality attributes ensure that NERC Reliability Standards have the greatest possible positive effect on the reliability of the bulk power system while:

- Striving to achieve a portfolio of performance, risk, and competency-based mandatory reliability requirements that provide an effective defense-in-depth strategy for achieving an adequate level of reliability of the bulk power system.

- Identifying a clear and measurable expected outcome, such as: (i) a stated level of reliability performance, (ii) a reduction in a specified reliability risk, or (iii) a necessary competency.

- Being structured in the form of *who, under what conditions (if any), shall perform what action, to achieve what particular result or outcome (that reduces a stated risk to the reliability of the bulk power system).*

Procedure:

Step 1 — Develop a short list of potential demonstration standards with a perceived high value return for the effort expended – seek input from persons experienced in implementing the existing set of NERC Board of Trustee approved reliability standards.

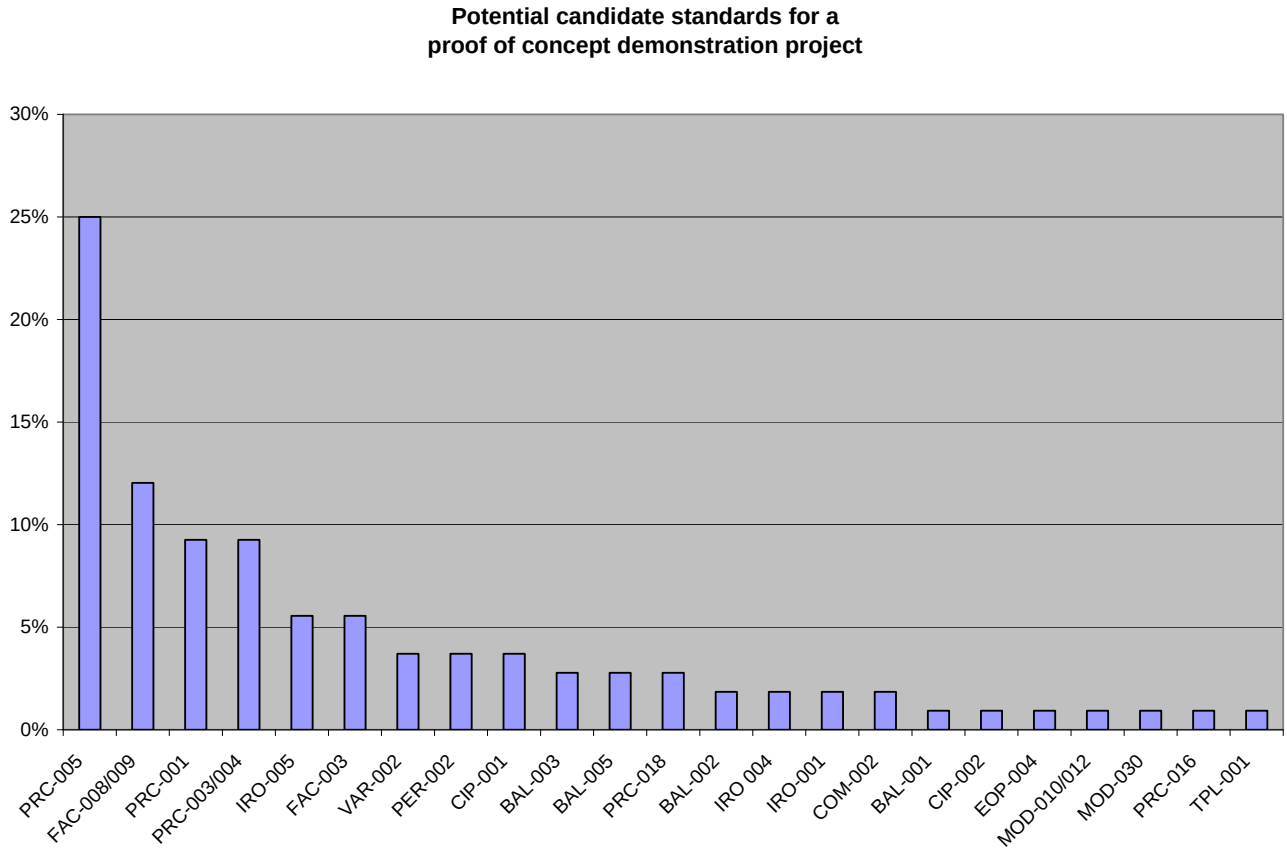
Actions — a survey with the following question was sent to industry participants with a broad base of NERC Standards experience.

> ***"Which FERC-approved NERC reliability standards do you feel should be revised in the immediate future because the resulting effort would have the highest potential for improvement in terms of impact to reliability of the bulk electric system (BES). Please provide a prioritized list (with "1" being the highest priority)."***

There were 21 respondents to the brief survey. These respondents represented various registered entities subject to the standards, ERO auditors, standards committee members, and contract personnel who provide professional services with respect to entity compliance programs.

A total of 23 individual NERC Reliability Standards in 11 standards categories were identified as potential candidate standards for a proof of concept demonstration project that represented a fairly diverse target set. However, to assist in analyzing the results, standards ranked a #1 priority in each response were assigned three points. Those ranked as a #2 priority were assigned two points and those ranked as a #3 priority were assigned one point. The following

chart displays the results in terms of the percentage of the total weighted points each standard received.



Step 2—summarize the results of the survey responses received and highlight the pros and cons for a near-term proof of concept demonstration considering: 1) reliability impact; 2) violation frequency; 3) political importance; and 4) ability to get entire redraft done in 2010.

Summary

1. PRC-005—Transmission and Generation Protection System Maintenance and Testing
    - The requirements of this standard on average have a **high** impact to reliability
    - Violations of this standard have been cited **102** times to date
    - Rated by the survey as the **#1** standard that could benefit from results-based quality attributes
    - Project 2007-17 Protection System Maintenance and Testing has a drafting team in place and a current estimated completion date of Q4 2010
    - Current draft standard is a major improvement to the current enforceable standard but may need some significant changes to comport with the results-based standard criteria
    - Project 2007-17 Protection System Maintenance and Testing includes the following standards, modifications to which would all need to be coordinated simultaneously:
        - **PRC–005-1 — Transmission and Generation Protection System Maintenance and Testing**

- PRC–008-0 — Underfrequency Load Shedding Equipment Maintenance Programs
- PRC–011-0 — UVLS System Maintenance and Testing
- PRC–017-0 — Special Protection System Maintenance and Testing

2. FAC-008—Facility Ratings Methodology & FAC-009 - Establish and Communicate Facility Ratings

- The requirements of these two standards on average have a **high** impact to reliability
- Violations of these standards have been cited **86** times to date
- Rated by the survey as the **#2** standard area that could benefit from results-based quality attributes
- Project 2009-06 Facility Ratings has a drafting team in place
- FAC-008-2 Facility *Ratings* is currently posted for pre-ballot review through January 12, 2010 with the initial ballot schedule to commence January 13
- Over the course of Project 2009-06: Facility Ratings the Standard Drafting Team has had difficulty striking a balance between the directives contained in FERC Order No. 693 and gaining industry consensus
- There is the possibility within the standards development process to pull this draft standard from ballot and take the opportunity and time to develop this standards area using results-based quality attributes
- Project 2009-06 Facility Ratings includes the following standards, both of which need coordinated simultaneously:
  - **FAC-008-1 — Facility Ratings Methodology**
  - **FAC-009-1 — Establish and Communicate Facility Ratings**

3. PRC-001— System Protection Coordination

- The requirements of this standard on average have a **high** impact to reliability
- Violations of this standard has been cited **six** times to date
- Tied with PRC-003/004 for the **#3** standards area that could benefit from results-based quality attributes
- Project 2007-06 System Protection Coordination has a drafting team in place and a current estimated completion date of Q4 2010
- The standard drafting team for Project 2007-06 System Protection Coordination has held a couple discussions with FERC staff that indicate more work might be needed before this standard can be balloted. The risk associated with the additional work might cause an adverse impact to the schedule and therefore, would preclude this standard from being used for the proof of concept demonstration.
- Project 2007-06 System Protection Coordination includes the following standard:
  - **PRC-001-1 — System Protection Coordination**

4. PRC-003—Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems & PRC-004 Analysis and Mitigation of Transmission and Generation Protection System Misoperations.

- The requirements of this standard on average have a **high** impact to reliability
- Violations of these standards have been cited **six** times to date
- Tied with PRC-001 for the **#3** standards area that could benefit from results-based quality attributes
- Project 2010-05 Protection Systems is identified in the Board-approved Reliability Standards Development Plan: 2010-2012 to be initiated in 2010. As such, a drafting team is not in place yet
- Since the project for these standards will not be initiated until sometime in 2010, the sub-team of the ad hoc group suggests that PRC-003 and PRC-004 are not good candidates to use for the proof of concept demonstration to assess the Results-Based Reliability Standard project

5. IRO-005 Reliability Coordination — Current Day Operations

- The requirements of this standard on average have a **high** impact to reliability
- Violations of this standards has been cited **two** times to date
- Tied with FAC-003 as the **#4** standard that could benefit from results-based quality attributes
- Project 2006-06 Reliability Coordination has a drafting team in place and a current estimated completion date of Q3 2010
- Project 2006-06 Reliability Coordination includes the following standards, modifications to which would all need to be coordinated simultaneously:
  - COM-001-1 — Telecommunications
  - COM-002-2 — Communications and Coordination
  - IRO-001-1 — Reliability Coordination — Responsibilities and Authorities
  - IRO-002-1 — Reliability Coordination — Facilities
  - **IRO-005-2 — Reliability Coordination — Current-Day Operations**
  - IRO-014-1 — Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators
  - IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators
  - IRO-016-1 — Coordination of Real-time Activities Between Reliability Coordinators

6. FAC-003—Transmission Vegetation Management Program

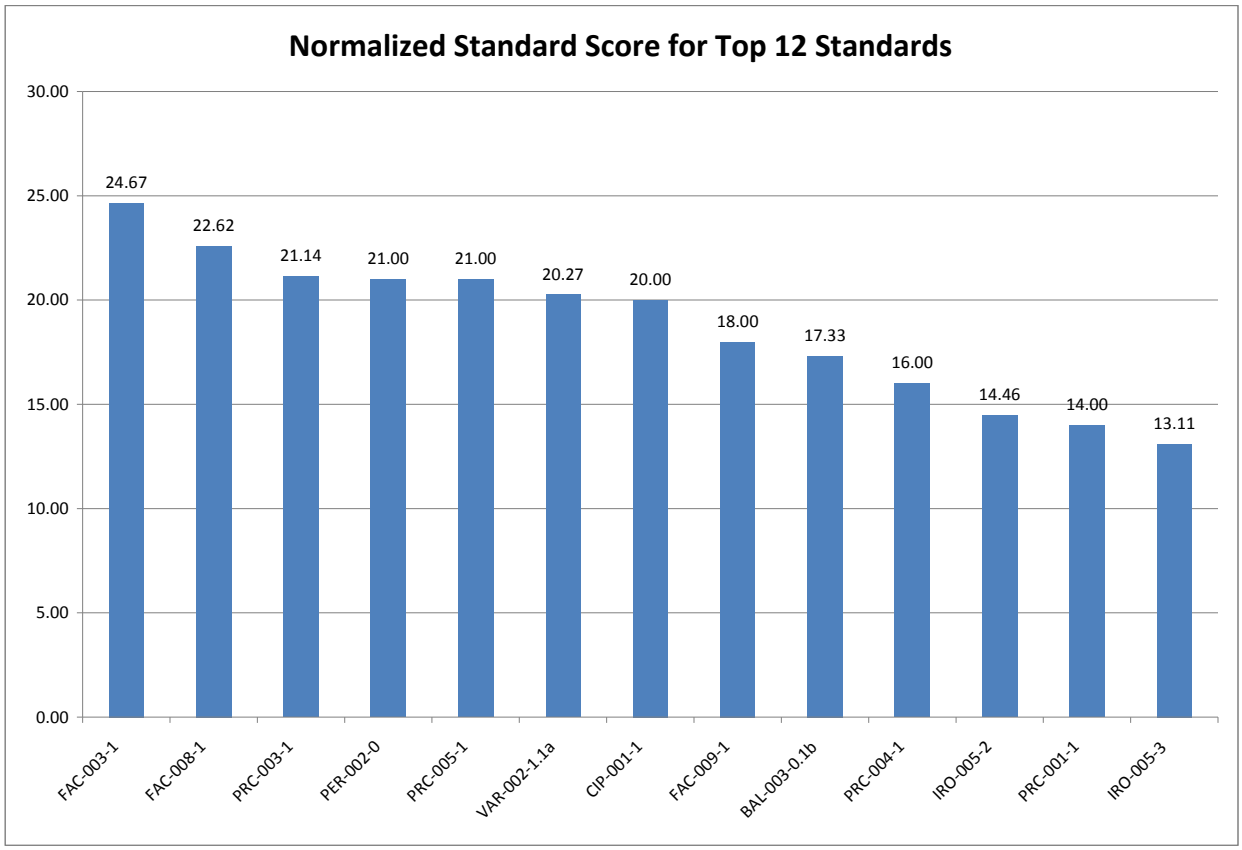
- The requirements of this standard on average have a **high** impact to reliability
- Violations of these standards have been cited **24** times to date
- Tied with IRO-005 for the **#4** standards area that could benefit from results-based quality attributes
- Project 2007-07 Transmission Vegetation Management has a drafting team in place and a current estimated completion date of Q4 2010

- Project 2007-07 Transmission Vegetation Management includes the following standard:
    - FAC-003-1 — Transmission Vegetation Management Program

Beyond the projects identified above, convergence on consensus of priority of standard development projects to pursue falls off considerably.

Step 3 — Compare the survey results in step 2 above with the work of the sub-team validating the reliability standard requirements scorecard developed earlier in the overall project. Of the projects identified above, those with the poorest scorecard ratings should be considered of higher priority relative to the other projects.

Results—Input from the scorecard effort evaluating the requirements of the top standards identified from the survey resulted in the following ranking:



On a scale of 1 to 30, the underlying requirements of these existing standards have the greatest deviation from quality attributes of results-based standards and thus a standard with a higher score would potentially benefit more from the proof of concept relative to one with a lower score. The scores have been normalized to allow comparison.

Step 4 — Finalize list.
In summary, four current standards development projects are potential candidates to use for the proof of concept demonstration to assess the Results-Based Reliability Standard project. These four standard development projects are ranked and recommended in the following order of precedence.

1. Project 2007-07 Transmission Vegetation Management:
    - **FAC-003-1 — Transmission Vegetation Management Program**
2. Project 2009-06 Facility Ratings:
    - **FAC-008-1 — Facility Ratings Methodology**
    - **FAC-009-1 — Establish and Communicate Facility Ratings**
3. Project 2007-17 Protection System Maintenance and Testing:
    - **PRC–005-1 — Transmission and Generation Protection System Maintenance and Testing**
    - PRC–008-0 — Underfrequency Load Shedding Equipment Maintenance Programs
    - PRC–011-0 — UVLS System Maintenance and Testing
    - PRC–017-0 — Special Protection System Maintenance and Testing
4. Project 2006-06 Reliability Coordination:
    - COM-001-1 — Telecommunications
    - COM-002-2 — Communications and Coordination
    - IRO-001-1 — Reliability Coordination — Responsibilities and Authorities
    - IRO-002-1 — Reliability Coordination — Facilities
    - **IRO-005-2 — Reliability Coordination — Current-Day Operations**
    - IRO-014-1 — Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators
    - IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators
    - IRO-016-1 — Coordination of Real-time Activities Between Reliability Coordinators

Additional stakeholder perspectives considered on the proposed standards:

PRC-005
It is the most violated standard and requires an inordinate amount of paperwork.
PRC-005 version 2 drafting is out of control in the detail of the draft standard. It can be turned around to meet the quality attributes of a results-based standard before posting again. It is the reported second-most violated standard (102 times) and the second-highest penalized ($387,000 total penalty amount) standard according to the published NOP.
This standard is recommended since lack of maintenance and testing of Protection Systems can have detrimental impact on BES reliability, lead to BES equipment damage and safety concerns. The present standard is one of the most heavily violated standards yet without evidence of real reliability issues resulting. This brings into question if appropriate performance expectations are being placed on industry. We propose the starting point be the draft PRC-005-2 that is presently under development.
Transmission and Generation Protection System Maintenance and Testing are the most violated NERC Reliability Standard for the period of November 1, 2009 through October 31, 2009. The purpose of this reliability standard is to ensure all transmission and generation Protection Systems affecting the reliability of the Bulk Electric System (BES) are maintained and tested. Without the appropriate maintenance and testing procedures in place, safeguarding the BES is not plausible. Due to the direct impact to the BES, this Reliability Standard needs clarification and would benefit from the concept demonstration of performance-based standards.
Highest number of violations, plus confusion to which equipment is covered by the standard and which equipment is excluded.
Utilities are found out of compliance with this standard more often than most other standards. Greater clarity may result in fewer fines. In addition, maintenance and testing requirements for current transformers, potential transformer, and the control circuits add confusions. In many cases CTs and other instruments are buried in generation housings, power transformer, and switchgear where detailed observation and testing pose significant challenges that may result in issues that adversely impact equipment availability.
PRC-005 — this is a standard currently under revision - based on the interpretation for this standard, we know that the standard needs clarity
This standard has gathered a lot public attention and hence, is the political hot potato. While I do not believe the standard needs a lot of new rewriting, some will help it.

FAC-008/009
It is one of the most violated standard and in my opinion contributes nothing to reliability of the BES by including generators in the applicability. I am also not convinced that it does anything for consistency in the calculation of ATC.
FAC-008 and 009 if taken together are the third most violated (86 times) and third highest penalized ($241,500).
FAC-008-1 — Should be coupled with FAC-009-1 to make it a complete ratings methodology standard. Entities maybe be using the most limiting machine rating but do not have a specified methodology to show compliance.
Some companies may overlook that equipment listed in R1.2.1 shall each be addressed using the considerations listed in R1.3.
FAC-008-009, since facility ratings are the foundation of planning and operation for a bulk electric system.
Facility Ratings Methodology is the fifth most violated NERC Reliability Standard for the period

of November 1, 2008 through October 31, 2009. The purpose of this reliability standard is to ensure that Facility Ratings used in the reliable planning and operation of the Bulk Electric System (BES) are determined based on an established methodology or methodologies. Without the appropriate and accurate facility ratings methodology and ensuing facility ratings, the resulting planning and operation of the BES is not possible. Due to the direct impact to the BES, this reliability standard needs clarification and would benefit from the concept demonstration of performance-based standards.

PRC-003/004
PRC-004 — relay misoperations have a very high potential to create a cascading event:
In the 2009 Long-Term Reliability Assessment report, the figure Trend 2 (on page 357) indicates that protection system misoperations are increasing substantially each year (2006 less than 10 percent, 2007 less than 40 percent, and in 2008 greater than 50 percent) and looking at Figure Trends 1 (page 356), they appear to be causing disturbance events of categories 2 and 3. PRC-004 and PRC-003 would address these misoperations and hopefully corrective action plans could be implemented to resolve the current trend.
Even though the QRSAWs identify the type of equipment, emphasis should be considered in including the definition of "protection system" as defined in the NERC Glossary of Terms in the standard (bullet point, bold print, etc). Many entities still miss the point here.

PRC-001
The consequences of this standard's impact on the bulk electric system are significant and yet I am hearing reports back from auditors working on many different company records that about problems with relays in the field that are not being captured by the existing standard on this topic.
PRC-001 — Coordination of settings is a very vague area and needs further clarification.
PRC-001 — There are Generator Operators who have been indoctrinated to give first priority to the facilities they operate, and as a result, they do not understand the consequences of the degraded relay on the reliability of the power system.
PRC-001-1 — System Protection Coordination--the criticality of system protection to the reliable operation of the Bulk Power System can only be ensured through the coordination of information between entities.

FAC-003
Does not cover momentary contact outages which can be a precursor to larger and more significant contact outages.
Not clear that vegetation contact and outage is a violation. Need to establish a requirement to address.
Has had a high profile and would benefit from a results-oriented review.
Vegetation maintenance is an important preventative risk management standard to ensure reliable operation of the BES and one of the most heavily violated standards. Again, are appropriate risk management expectations being placed on industry? We propose the starting point be the draft FAC-003-2 that is presently under development. Utilizing the drafting team's work will also make use of supporting guideline documents, envisioned by the Results-Based initiation, that are in development for each of those projects.

IRO-005
To maintain real-time continuity of service, real-time operations must be addressed.

Comments on remaining candidate standards:

VAR-002	It allows the TO/TOP to provide the generator a reactive schedule but requires the Generator to maintain the AVR in the auto voltage mode.
BAL-002	Critical for reliability of the BES.
BAL-003	This is a standard that has an impact on frequency and has had several requests for interpretation.
CIP-001	Sabotage Reporting is the third most violated NERC Reliability Standard for the period of November 1, 2008 through October 31, 2009. The purpose of this reliability standard is to report disturbances or unusual occurrences, suspected or determined to be caused by sabotage to the appropriate systems, governmental agencies, and regulatory bodies. The non-report of a suspected or determined sabotage event could have a major impact to the BES. Due to the direct impact to the BES, this reliability standard needs clarification and would benefit from the concept demonstration of performance-based standards.
IRO 004	Clarify what information is needed for system studies.
IRO-001	IRO-001/TOP-001 — Understanding what a directive is and following directives is critical to maintain BES stability. Coordination of real time activities fits into this as well.
CIP-002	This standard may be a good compliment to round out the results-based proof of concept effort. The CIP-002 is a very high profile standard being afforded leeway for expedited standard development. It is important that this standard be written in a manner that supports the results-based initiative and that the industry demonstrates it can deliver a quality product in a timely manner. Including this project will deliver an example proof of concept well before year-end 2010.
COM-002	Existence and maintenance of communication facilities is required to have an effective means of transmitting critical generation information and directives.
EOP-004	Disturbance event reporting is a major source of confusion and frustration in the industry right now. Event analysis and lessons-learned are fundamental to lowering the "risk curve", a clear and consistent reporting threshold is needed for reporting of system events. Data shows that the vast majority of events analyses as well as CIQ/CVIs, originate from system event reports. Alleged violations of EOP-004 have only been enforced four times with no penalties assessed.
MOD-010/012	Clarify generator testing requirements and specifically what generators need to be tested within plants that have multiple generators. A number of the MOD standards refer back to the RRO for details; however, RROs do not have approved criteria to provide guidance.
PRC-016	Version 0 standard lacks critical detail for ensuring continued future reliability of BES.
TPL-001	Correctly planning the performance of system would also resolve this trend; that is why I suggest the TPL-001-1.

EXHIBIT E — Ad hoc Team's Work Plan and Schedule

Results-Based Reliability Standards Initiative
Ad hoc Group

Work Plan and Schedule
Updated January 6, 2010

Phase 1 — Concept Development

	Milestone/Deliverable	Assigned to	Date	Status
1.	Kickoff meeting and discussion of scope and participation.	Cauley	8/7/09	Complete
2.	Develop startup work plan.	Cauley	8/14/09	Complete
3.	Distribute documents on related efforts to improve standards.	Li, Bilke, Taylor	8/14/09	Complete (Bibliography to be developed by Cauley – deferred to Phase 2)
4.	Draft a **written design philosophy** for reliability standards.	Cauley	10/22/09	Complete – presented to Standards Committee, MRC and Board
5.	Develop criteria/attributes for review of existing standards.	Bilke	8/28/09	Complete
6.	Communicate to stakeholders			
	a. Standards Committee conf call briefing	Taylor/Cauley	9/3/09	Complete
	b. Standing committees joint presentation	Cauley/Taylor	9/15/09	Complete
	c. Standards three-year plan webinar	Taylor/Cauley	9/17/09	Complete
	d. WIRAB conference	Cauley	10/16/09	Complete
7.	Conduct a review and develop "scorecard" and assign "category" for each existing requirement based on criteria above.	All	9/11/09	Complete
8.	Develop a **gap analysis report** on the existing standards compared to criteria.		9/30/09	Complete – based on 1360 board-approved requirements
9.	Develop improved **construct/format of a reliability standard**, including supporting documents; reference SCPS's prior effort.		10/22/09	Complete – preliminary outline in final report
10.	Develop several **examples of model performance-based standards** focused on reliability objectives.		10/16/09	Deferred to Phase 2
11.	Develop a **roadmap and high-level work plan for**		10/16/09	Deferred to Phase 2

implementing modified approach to standards development.			
12. Develop a **communications plan**.		10/23/09	Deferred to Phase 2
13. Present deliverables to NERC Standards Committee for approval (meeting). Carmel IN	Adamski	10/7-8/09	Complete
14. Present deliverables to NERC MRC and Board	Adamski	11/4-5/09	Complete
15. Sunset ad hoc group and transition ownership to Standards Committee (conference call 12/3/09).	Adamski	12/3/09	Deferred at request of NERC Board to continue Phase 2

Phase 2 — Demonstration of Concepts

Milestone/Deliverable	Assigned to	Date	Status
16. Develop Phase 2 work plan, deliverables and assignments.	Cauley	11/20/09	Draft reviewed 11/13/09
17. Obtain services of consultant with qualifications in results-based standards to assist team.	Cauley and Taylor	11/30/09	Potential candidate identified
18. Validate rankings of existing, enforceable requirements: 1) priority on top 10 most violated standards to feed Task 19; 2) share final results with compliance program to inform priorities for audit and enforcement.	Cauley, Rollinson, Rueckert, Hajovsky	12/15/09	Taylor provided a list of top 10 violated from BCC open meeting 11/4/09 Hajovsky coordinating the validation of the scorecard
19. Perform gap analysis to determine highest priority standard(s) for near-term proof of concept demonstration (1 to 3 standards) based on: 1) reliability impact; 2) violation frequency; 3) political importance; and 4) ability to get done in 2010.	Edge	12/15/09	Industry survey was issued and summarized. Sub-team provided a list of standards to be considered by entire group on 12/18/09
Note: The Ad hoc group agreed to use Project 2007-07 Transmission Vegetation Management (FAC-003-1 — Transmission Vegetation Management Program) as the proof-of-concept demonstration and to place the following three projects as priority projects with respect to implementing results-based criteria: 5. <u>Project 2009-06 Facility Ratings:</u> • **FAC-008-1 — Facility Ratings Methodology**			Results of Activity 18 above were incorporated into final recommendation and recommendation was provided to Ad hoc group for the 01/08/2010 meeting. Complete

- **FAC-009-1 — Establish and Communicate Facility Ratings**

6. Project 2007-17 Protection System Maintenance and Testing:
   - **PRC–005-1 — Transmission and Generation Protection System Maintenance and Testing**
   - PRC–008-0 — Underfrequency Load Shedding Equipment Maintenance Programs
   - PRC–011-0 — UVLS System Maintenance and Testing
   - PRC–017-0 — Special Protection System Maintenance and Testing
7. Project 2006-06 Reliability Coordination:
   - COM-001-1 — Telecommunications
   - COM-002-2 — Communications and Coordination
   - IRO-001-1 — Reliability Coordination — Responsibilities and Authorities
   - IRO-002-1 — Reliability Coordination — Facilities
   - **IRO-005-2 — Reliability Coordination — Current-Day Operations**
   - IRO-014-1 — Procedures, Processes, or Plans to Support Coordination Between Reliability Coordinators
   - IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators
   - IRO-016-1 — Coordination of Real-time Activities Between Reliability Coordinators

20. Review concepts and plan with FERC staff and obtain feedback (repeat as needed).	Alan Gerry and Gerry Adamski and Cauley	12/15/09	
21. Develop and implement communications plan and communicate at all available opportunities. Additions to include in plan drafted for 12/18/2009 meeting: • Make specific assignments for each activity • Outreach to trade organizations (in January to include EEI CEO Meeting, Large Public Power Meeting, and APPA CEO Meeting) • Outreach to others	Mosher, Rana, Streeter (NERC Standards Committee Communications and Planning	1/15/10	Draft communication plan was provided during 12/18/2009 meeting. Will be presented to the SC during their January meeting.

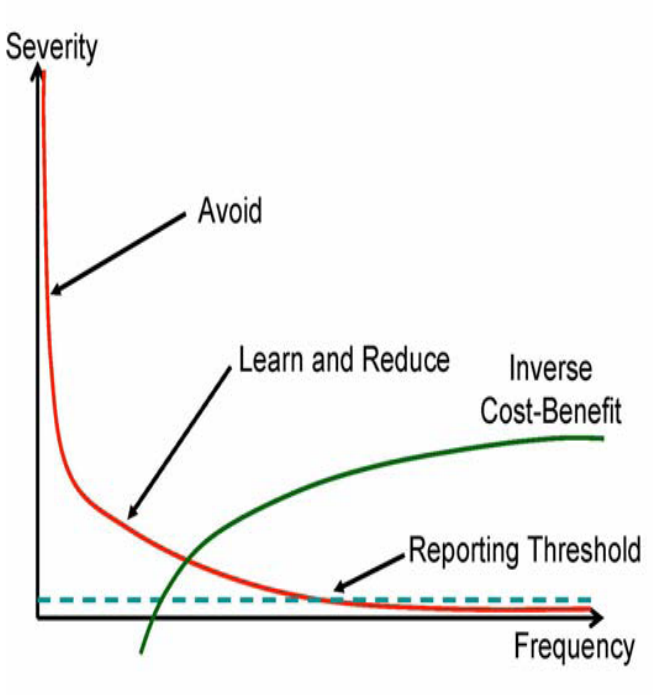
• Develop communications for drafting teams	Subcommittee)		
22. Apply results-based criteria to all current working drafts of standards and deliver to drafting teams; work with SDT chairs and coordinators to do. • Inform all current drafting teams of the results-based criteria consistent with presentation from November MRC	Taylor and Drafting Teams	2/28/10	Plan is to provide "proof-of-concept" SDT with beta training material and provide remaining drafting teams with new criteria for developing draft standards.
23. Engage selected drafting team(s), and in consultation with those team(s), develop expedited drafts of results-based standard(s) using existing format. Like PRC 5; do another that can be done quicker; CIP-002; one that could be done quickly to vote; one close or easy	Cauley, Taylor, Bilke Selected Drafting Teams	3/31/10	Charles Rogers (chair of the SDT for Project 2007-17 Protection System Maintenance & Testing has requested Ad hoc attendance at the Feb 16-17 meeting of the team to help with conversion to the results-based criteria format.
24. Develop each of these standard(s) in proposed modified format (mandatory vs. informational sections).	Huntley and Li	4/15/10	Ben suggested the new format for standards be vetted through the Standards Committee Process Subcommittee. Ben will be working with the SCPS to further develop the format. As discussed during the 12/29/2009 meeting of the Ad hoc Group, a revised format is not an essential activity for this Ad hoc Group to finalize. Engagement of a consultant in the near future is essential to complete this activity in conjunction with the SCPS.
25. Develop a training/orientation program for drafting teams and job aids (including criteria) to assist in constructing results-based standards. • Beta version of training materials to be prepared and	Sidor (lead), Taylor, and Consultant	4/30/10	

delivered to the SDT that will work on proof-of-concept		
26. Develop road map for prioritized development of results-based standards; incorporate more fully into 3-year plan.	Taylor	4/30/10
27. Work with Standards Committee to institutionalize results-based approach and expanded role of committee in managing quality and timeliness of results.	Mosher and Long	4/30/10
28. Present final results to Standards Committee, MRC, and Board.	Adamski and Cauley	5/5/10
29. Deliver training and tools; initiate periodic review and refresher training program. Begin 4/10 and continuing through 2010.	Sidor and Taylor	Begin 4/30/10
30. Prepare bibliography of resources.	Li	5/31/10
31. Sunset ad hoc team.	NERC Board	5/31/10

Development of a Risk Management Tool

Action Required
None

Background
Risk Management Concepts — Risk management, when used consistently and continuously by system owners and operators, can measure, monitor, and manage bulk power system (BPS) reliability risks. The objective of managing risks is to identify and prioritize potential reliability concerns as well as plan for their mitigation. In addition, one of the goals of this proposed risk-based tool is to provide feedback to industry and to NERC's Event Analysis and Information Exchange program for reporting and classification.

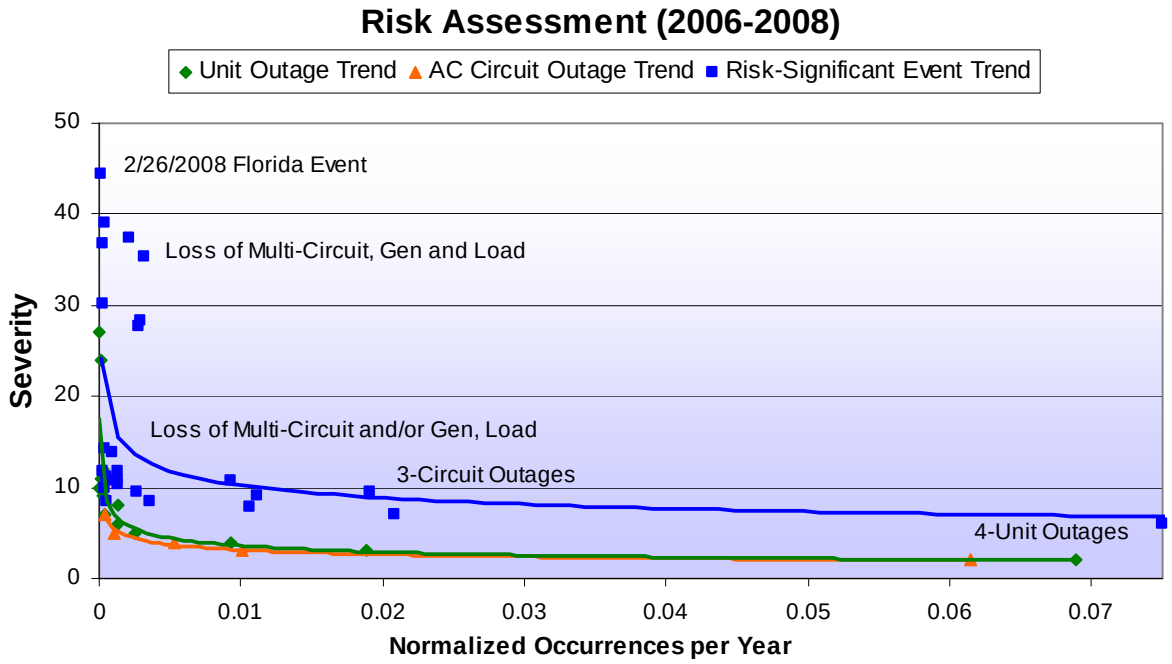


Every day, operators use experience and information to maintain reliability, positioning the bulk power system to avoid adverse reliability events. They do this against the "noise" of numerous low-level, minor-impact events. In the graph to the right,[1] the red line depicts the events that affect bulk power system reliability ranging from minor to extreme severity. The line marked "Reporting Threshold" is conceptually a level below which the severity impact is low.

Risk-Significant Events — NERC endeavored to develop this concept further, evaluating its application to the bulk power system. Identifying the frequency of risk-significant events is the first step to measure severity and impact. The frequency (occurrences/year) was derived and normalized from existing NERC sources, such as the System 1 Disturbances, Transmission Availability Data System (TADS), situational awareness, and Generating Availability Data System (GADS). In some cases, no historical event data is available for extreme events, and therefore, engineering-based assumptions can be used to estimate the frequency of the event (i.e. Geomagnetic Storms and impacts). These events are assumed to be random in nature, independent, mutually exclusive, cover the majority of risks, and demonstrate a consistent link to reliability. Further, statistical significance is important to establish a benchmark and is a function of exposure to events.

[1] The details of the risk curve are available at http://www.nerc.com/filez/pcmin.html in the zip file described as *Planning Committee Presentations — December 8–9, 2009.*

Example Tool Development — There are a number of ways to approach the development of relative event severity. For this example, risk was ranked by relative severity levels of event to quantify their impact. In the graph below, NERC staff has developed a draft curve from actual event frequencies coupled with a simple scoring system.



Next Steps — The aforementioned is an illustration of a Risk-Management Tool developed to investigate the potential for use by NERC. Based on this evaluation, NERC staff anticipates this tool can provide high value to its stakeholders as an engineering tool to improve bulk power system reliability. The relative ranking of events requires industry expertise, agreed-upon goals and engineering judgment. The final numerical ranking/scoring should consider the NERC approved Adequate Level of Reliability[2] and existing Standards.

The Planning Committee and its Reliability Metrics Working Group will be key groups to build industry consensus on relative event rankings, gather historical event data, develop event trends and support industry risk assessment.

[2] Detailed definitions of ALR are available at http://www.nerc.com/docs/pc/Definition-of-ALR-approved-at-Dec-07-OC-PC-mtgs.pdf.

Agenda Item 9.b.
MRC Meeting
February 15, 2010

Action Plan for Completing Event Analysis Reports and Providing Feedback to the Industry

Action Required
For discussion and comment

Background
Bob Cummings, Director of Event Analysis and Information Exchange, will present the NERC's action plan for sharing details and lessons learned from event analysis reports among industry participants.

Some highlights of the action plan are:

- Finalization of procedures for the triage, investigation, root cause analysis, and transparent reporting of system events.
- Team with Regional Entities and engage registered entities in rigorous self-evaluation of system events and reliability risk mitigation.
- Transfer additional existing NERC engineering staff to support the Event Analysis group.
- Establishment of an Event Analysis Working Group to better leverage the subject matter expertise from the Planning and Operating Committees.
- Develop a NERC-wide event recording and recommendation tracking system so that all events are tracked from their occurrence to the resolution of the recommendations.
- Develop a Secure Event Analysis Lessons Learned (SEALL) website for posting event analysis reports and lessons learned. This system would be tied to the NERC Secure Notification System used for Alerts to leverage commonality of user registration and credentials — individual login IDs and vetting.
- Begin posting all Detailed Reports (non-redacted) from event analyses as references for the industry.
- Begin sharing Abbreviated Reports between regions — possible common posting on NERC SEALL website.
- Begin posting of details behind event performance elements on the SEALL website — links to the detailed and abbreviated reports.
- Clear the outstanding caseload of the Event Analysis group.

Other elements will be added to the plan as appropriate.

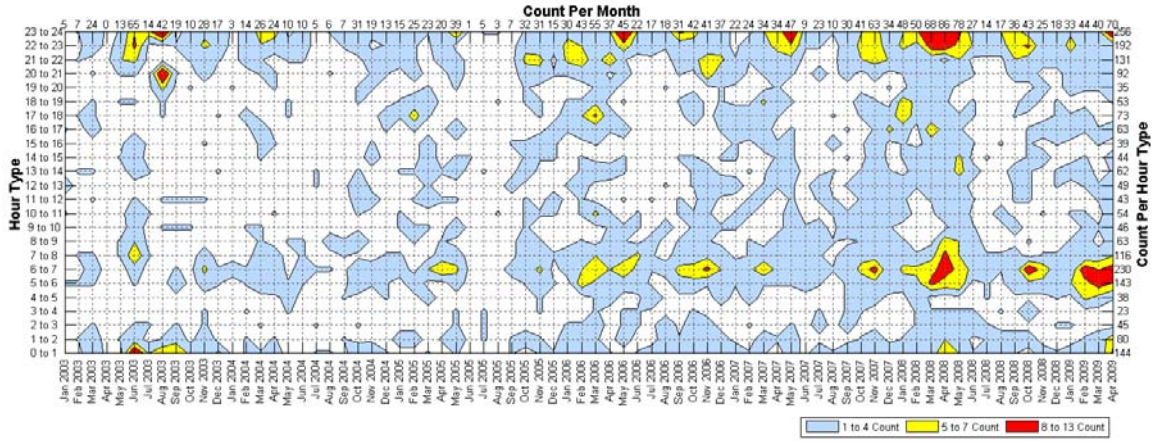
Agenda Item 10
MRC Meeting
February 15, 2010

Plans for Study of Interconnection Frequency Response

Action Required
Information Only

Background
Bob Cummings, Director of Event Analysis and Information Exchange, will present NERC's current plan for study of interconnection frequency response to achieve a better understanding of the factors influencing frequency performance in North America.

Various NERC activities have taken place over the past few years in an effort to understand the observed steady decline in interconnection frequency response. While some significant insights have been gained, and system-wide and technical improvements achieved in the Western and ERCOT Interconnections, a deeper and more dedicated effort is needed now. System planning and operations experts are anticipating significantly higher penetrations of renewable energy resources, which present some new and different technical challenges. Load management and other demand-side initiatives also continue to grow. Most importantly, a continued downward trend in interconnection frequency response for several more years may create a situation in which credible contingencies encroach on the first step of under-frequency load shedding (UFLS). Taken together, it is clear that interconnection frequency response poses a significant challenge for bulk power system reliability.



The chart above shows the increase in the number of frequency disturbances (1-Minute Frequency Delta GT/LT +/- 0.035Hz) that were observed in the Eastern Interconnection between January 2003 and April 2009.

A new frequency response initiative is planned to organize and coordinate a broad range of current projects that cover several NERC program areas. Basic objectives include:

- Development of a clearer and more specific statement of frequency-related reliability objectives, including better definitions for 'ownership' of responsibility for frequency response.
- Collection and provision of more granular data on and technical analyses of frequency-driven bulk power system events, including root cause analyses.
- Metrics and benchmarks to improve performance tracking.

- Increasing coordinated communication and outreach on the issue, to include webinars and NERC alerts, to share lessons learned.
- Focused discussion on and communication of emerging technical and technology issues, including frequency-related effects caused by renewable energy integration, 'smart grid' technology deployment, and new end-use technology.

Initial actions will include:

Formalize the Frequency Working Group: NERC's Resources Subcommittee and Operating Committee have updated the charter for the Frequency Working Group and formalized this group as the supporting working group for this initiative.

Event Analysis: NERC staff will work with the Resources Subcommittee to conduct a root cause analysis of frequency events involving the loss of large amounts of generation.

Data Request: The NERC Operating Committee, Frequency Working Group, and NERC staff will work with the Resources Subcommittee and Frequency Response Standards Drafting Team to implement a data collection effort from Balancing Authorities.

Metrics and Benchmarking: NERC staff will work with the Reliability Metrics Working Group and Resources Subcommittee to track frequency performance on each interconnection to monitor trends and performance. We expect that an initial set of benchmarks will be developed for discussion and testing during 2010.

Communications and Outreach: NERC staff will work with industry experts to share lessons learned and highlight successful practices on a regular basis. We will develop a regular communications discipline with respect to frequency response issues.

Standards Development: The Frequency Response Standards Drafting Team (SDT) is considering a field test to support its Project 2007-12-Frequency Response. In addition, the SDT will work with the data collected through the data request and field trial to develop a Frequency Response Standard. The SDT will also work through the NERC Standards Committee to coordinate its efforts on interpretations requests regarding standards related to frequency performance.

Some elements of this plan have already been put in motion.

Agenda Item 11
MRC Meeting
February 15, 2010

MRC Input on Regional Delegation Agreement Revisions

Action Required
Discussion

Summary of Proposed Changes
On January 14, 2010, the Federal Energy Regulatory Commission (FERC) granted an extension of the existing and effective NERC-Regional Entity Delegation Agreements (RDA) with the eight Regional Entities, until May 2, 2011 to permit NERC and the Regional Entities time to negotiate amended Regional Delegation Agreements (RDAs) based on experiences and issues identified to date, obtain stakeholder comments, obtain approval from their respective governing bodies, and file with the Commission for approval of the amended RDAs. Efforts also were initiated to evaluate changes to the NERC Rules of Procedure (ROP), including the Uniform Compliance Monitoring and Enforcement Program (CMEP) and to develop Performance Metrics that would be used in evaluating the performance by NERC and the Regional Entities of their statutory responsibilities.

On January 29, 2010, NERC posted for comment the current working draft of a revised pro forma NERC-Regional Entity Delegation Agreement and a summary of revisions being developed to the CMEP. These documents are the product of ongoing discussions between NERC and the Regional Entities. The comment period on these documents runs through March 5, 2010. NERC and the Regional Entities are still discussing the language for the amended RDA and the changes that should be made to the CMEP, and have not yet come to agreement. NERC and the Regional Entities are continuing to work on the development of Performance Metrics. Specific proposed changes to the ROP and CMEP will be posted for a full 45-day comment period, along with proposed Performance Metrics, at a later time.

The following documents are available on NERC's website.

1. Working Draft of the Revised pro forma RDA dated January 29, 2010
2. Redline of the Working Draft of the Revised RDA against the current pro forma RDA
3. Memo summarizing proposed CMEP changes under consideration

Annual Priorities and Emphasis Discussion

Action Required
None

Background
Chairman Tymofichuk will lead a discussion of ERO priorities and emphasis as viewed by the committee for the coming year. MRC members are reminded to represent the views of their sectors in this discussion rather than their individual organizations.

2011 NERC Business Plan and Budget Preparation Schedule

DATES	NERC	Regional Entity
January–February	NERC Program Areas provide input to NERC finance on business plan and budget requirements. Main focus is on 2011 but should provide longer term projections where feasible. NERC Program Areas should be working together, exchanging information and developing proposed 2011 resource requirements through a coordinated and integrated approach. Regional Entities will be looking to NERC for guidance on developments and other factors that will drive resource needs.	Discussions with NERC Program Areas regarding projected resource requirements. NERC/REBG template working group works on developing budget templates and procedures.
January 29	Draft 2011 BP&B Common Assumptions posted (internally) and circulated among the regions and NERC.	
Commencing on or about February 3	NERC finance provides NERC Program Area management detailed schedule of 2010 budget breakdown for personnel, meeting and operating expenses, including contractors and consultants, as well as preliminary allocation of 2010 efficiency savings target.	
Week commencing February 8	Finalize efficiency savings and 2010 resource allocation.	
February 5	Joint REMG and REBG Teleconference Meeting; BP&B assumptions to be discussed.	Joint REMG and REBG Teleconference Meeting; BP&B assumptions to be discussed.
February 11	FAC Conference Call to discuss quarterly business; includes preliminary 2009 results, update on 2011 BP&B process and 2010 BP&B; review and recommendation on TRE 2010 BP&B Amendment.	
February 14	REMG — Phoenix, Arizona; REMG and NERC Management approve final BP&B Assumptions.	REMG — Phoenix, Arizona; RMs approve final BP&B Assumptions.
February 15–16	NERC Board of Trustees meeting; includes review and action on TRE 2010 BP&B Amendment update on 2011 BP&B Schedule.	
February 19	Final 2011 Common Assumptions circulated to REMG and REBG.	

DATES	NERC	Regional Entity
	NERC finance circulates internal shell draft document for 2011 BP&B to NERC Program Areas.	
February 20–27	NERC finance and NERC Program Management work to complete initial rough draft of BP&B for circulation to Res.	
March 1 (date may be moved up)	NERC BP&B rough draft circulated to REs for input.	REBG facilitates review of NERC draft BP&B by Regional Entity Program Areas.
	NERC REBG Template working group completes templates; Budget template, metrics template and budget procedure document sent to REs. NERC BP&B rough draft to be provided for circulation to the REs for input.	Template working group completes templates; Budget template, metrics template and budget procedure document sent to REs; NERC BP&B rough draft to be provided for circulation to the REs for input.
March 2–March 31	NERC and Regional Entity Program Areas and finance teams work together to discuss and refine NERC draft — series of conference calls to be scheduled with NERC and REBG reps and each NERC and Regional Entity Program Area.	NERC and Regional Entity Program Areas work together to discuss and refine ERO resource needs.
April 12	Draft #1 of 2011 NERC Business Plan and Budget posted and sent to FAC.	
April 14 (1-3 p.m. EDT)	**TENTATIVE** — FAC conference call to discuss Draft #1 business plan and budget and, subject to timing of receipt by NERC, review of WECC BP&B amendment associated with DOE stimulus grants.	
May 3		Regional Entity 2009 True-up filings due to NERC.
May 5	Stakeholder Comments due on Draft #1 of NERC Business Plan and Budget.	
May 10		Preliminary internal draft of Regional Entity business plans and budgets submitted to NERC for circulation among NERC program managers for review and feedback. Should include metrics consistent with output of RDA renegotiations.
May 10	FAC Meeting — update on BP&B as part of agenda.	
May 10–17	NERC Program Area management reviews and provides feedback on draft Regional Entity	NERC and Regional Entity Program management review and discuss Regional

DATES	NERC	Regional Entity
May 11–12	NERC BOT and MRC Review of Draft #1 of NERC BP&B, including summary prepared by NERC staff of comments received — Baltimore, MD — FAC Chair to brief BOT.	
May 18	Teleconference between NERC finance and REBG to discuss areas of potential revision to overall ERO BP&B (Draft #1 of NERC BP&B and preliminary drafts of Regional Entity BP&Bs).	Teleconference between NERC finance and REBG to discuss areas of potential revision to overall ERO BP&B (Draft #1 of NERC BP&B and preliminary drafts of Regional Entity BP&Bs).
May 28	Draft #2 of 2011 NERC Business Plan and Budget posted; NERC files ERO 2009 BP&B True-Up with FERC.	Draft 1 of Regional Entity Business Plans and Budgets posted on NERC website.
June 28	Stakeholder Comments due on NERC Draft #2 of NERC BP&B.	Comments due on Draft 1 of Regional Entity Business Plans and Budgets.
July 8	NERC management continues review of final revisions to NERC BP&B, including any changes to respond to stakeholder comments.	Final Regional Entity budget submittal due — approved by Regional Entity board. Regional Entities also submit final list of LSEs.
July 12	FAC conference call agenda posted (no meeting or call). NERC and Regional Entity final BP&Bs to be included in agenda materials; including summary of stakeholder comments.	
July 19	FAC conference call review and provide direction on any changes necessary to finalize NERC and Regional Entity BP&Bs and RDA financial metrics.	
July 21	Final NERC and Regional Entity BP&B and assessments mailed to FAC, Board of Trustees and Member Representatives Committee.	
August 4	FAC Meeting to approve NERC and Regional Entity final 2011 BP&Bs, as well as financial RDA metrics.	
August 5	NERC and Regional Entity BP&Bs and assessments, as well as RDA metrics (both financial and non-financial), presented to Board of Trustees for approval.	
August 24	Submit package to FERC and Canadian provincial authorities for approval. Package to include: (1) the NERC budget approved by the board, (2) NERC's annual funding requirement (including regional entity costs for delegated functions) and (3) the mechanism for assessing charges to recover that annual funding requirement, together with supporting materials in sufficient detail to support the requested funding requirement (130 days prior to beginning of budget (calendar) year.	

Update on Regulatory Matters
(As of January 27, 2010)

Action Required

None

Regulatory Matters in Canada

1. The Alberta Utilities Commission has approved twenty-four NERC Reliability Standards as mandatory and enforceable within the province, and is considering additional standards recommended for approval by the Alberta Electric System Operator.

FERC Orders Issued Since the Last Update

1. October 26, 2009 – Further Guidance Order on Filing Reliability Notices of Penalty and the use of an abbreviated format for a pro forma NOP. *Docket Nos. AD10-1-000, RR09-7-000*

2. November 2, 2009 – Order approving proposed revisions to the Standards Development Process of Texas Regional Entity, the Texas Regional Entity Reliability Standards Committee Procedure and Registered Ballot Body Procedure. *Docket No. RR09-5-000*

3. November 13, 2009 – The Commission issued a notice stating that it would not further review the Notices of Penalty submitted in the October 14, 2009 Omnibus Notice of Penalty Filing. *Docket No. NP10-2-000*

4. November 19, 2009 – Order No. 890D - Preventing Undue Discrimination and Preference in Transmission Service - FERC affirms its basic determinations in Order Nos. 890, 890-A, 890-B, and 890-C. *Docket Nos. RM05-17-005 and RM05-25-005; Order No. 890-D*

5. November 24, 2009 – Order No. 729 – The Commission approves six Reliability Standards for the Calculation of ATC, CBM, TRM, TTC and Existing Transmission Commitments for the BPS. *Docket Nos. RM08-19-000, RM08-19-001, RM09-5-000, RM06-16-005*

6. December 2, 2009 – The Commission approves an interpretation of TOP-002-2. *Docket No. RD09-6-000*

7. December 10, 2009 – FERC issues a Letter Order approving NERC's February 27, 2009 filing regarding Violation Severity Levels for TOP-004-2. *Docket No. RD09-3-000*

8. December 11, 2009 – FERC issues a Notice stating it would not further review the following Notices of Penalty: *NP10-3-000* AES Beaver Valley, LLC; *NP10-4-000* AES Ironwood, LLC; *NP10-5-000* AES Red Oak, LLC; *NP10-6-000* AES Warrior Run; *NP10-7-000* East Kentucky Power Cooperative; *NP10-8-000* Union Power Partners, L.P.; *NP10-9-000* Westmoreland Partners; *NP10-10-000* AES Cayuga, LLC; *NP10-11-000* AES Greenidge, LLC; *NP10-12-000* AES Somerset, LLC; *NP10-13-000* AES Westover, LLC; *NP10-14-000* Cedar Bay Generating Company, L; NP10-15-000 Mirant Potrero,

LLC; *NP10-16-000* Mirant Delta, LLC; *NP10-17-000* Lincoln County Power District No. 1; *NP10-19-000* Poudre Valley Rural Electric Ass'n, Inc.

9. December 17, 2009 – Order No. 730 – FERC approves three INT Reliability Standards INT-005-3, INT-006-3, and INT-008-3. *Docket No. RM09-8-000*

10. December 17, 2009 – Order granting EEI's request for clarification regarding the CIP Version 2 Reliability Standards. *Docket No. RD09-7-001*

11. December 17, 2009 – Order addressing NERC's CIP Implementation Plan and Requiring Compliance Filing. *Docket No. RM06-22-010*

12. January 5, 2010 – Order Rejecting Army Corps of Engineer's Request for Rehearing of FERC's October 15 Order stating that federal entities that use, own, or operate the bulk power system must comply with NERC mandatory Reliability Standards. *Docket No. NP09-26-001*

13. January 14, 2010 – Letter Order Approving Amendments to the NERC Rules of Procedure to reflect the elimination of the Reliability Readiness Evaluation and Improvement Program. *Docket No. RR10-3-000*

14. January 14, 2010 – Letter Order Approving Amendments to the SPP Bylaws. *Docket No. RR10-5-000*

15. January 14, 2010 – Letter Order Approving Amendments to the Regional Delegation Agreements to Extend the Initial Term of Each Agreement until May 2, 2011. *Docket No. RR10-2-000*

16. January 21, 2010 – Order Approving the Technical Feasibility Exception Procedures Amendment to NERC's Rules of Procedure. *Docket No. RR10-1-000*

17. January 21, 2010 – Order Approving Nuclear Plant Interface Coordination (NUC) Reliability Standard, NUC-001-2. *Docket No. RD09-10-000*

18. January 21, 2010 – Notice of Inquiry Regarding the Transmission Loading Relief Standard and FERC's Open Access Transmission Tariff. *Docket No. RM10-9-000*

19. January 21, 2010 – Notice of Inquiry regarding the integration of Variable Energy Resources. *Docket No. RM10-11-000*

NERC Filings Since the Last Update

1. October 22, 2009 – NERC's response to the U.S. Department of Energy's Motion for Stay. *Docket No. NP09-26-000*

2. October 23, 2009 – Compliance Filing in Response to Order No. 723 of proposed VSLs for WECC Regional Reliability Standard. *Docket No. RM08-12-000.*

3. October 28, 2009 – NERC submits comments on the Topological and Impedance Element Ranking (TIER) of the Bulk Power System Preliminary Report. *Docket No. RM06-16-000*

4. October 29, 2009 – Petition for Approval of Amendments to NERC ROP Section 412 and Appendix 4D, "Procedure for Requesting and Receiving Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Standards." *Docket No. RR10-1-000*

5. November 2, 2009 – Quarterly Report Regarding NERC's Reliability Standards Voting Results (July-September 2009). *Docket No. RR06-1-000*

6. November 9, 2009 – Comments in response to the National Institute of Standards and Technology Framework and Roadmap for Smart Grid Interoperability Standards Release 1.0.

7. November 12, 2009 — Petition for Approval of Amendments to Extend for One Year the Delegation Agreements with Regional Entities. *Docket No. RR10-2-000*

8. November 12, 2009 – Petition for Approval of Amendments to NERC's Rules of Procedure for the purpose of reflecting the termination of the NERC Reliability Readiness Evaluation and Improvement Program. *Docket No. RR010-3-000*

9. November 17, 2009 – Petition for Approval of an Interpretation of Reliability Standard PRC-005-1 Requirement R1. *Docket No. RM06-16-000, RM06-16-007 and RM10-5-000.*

10. November 17, 2009 – Petition for Approval an Interpretation of Reliability Standard TPL-002-0 Requirement R1.3.10. *Docket Nos. RM06-16-000, RM06-16-0007, RM10-5-000 and RM10-6-000*

11. November 17, 2009 – Petition for Approval of an Interpretation to Reliability Standard CIP-007-2 Requirement R2. *Docket No. RD10-3-000*

12. November 20, 2010 – Petition for Approval of Two Reliability Standard Revisions to Withdraw MISO Waivers in Reliability Standards INT-003-2 and BAL-006-1. *Docket No. RM06-16-000*

13. November 20, 2010 – Informational Filing in response to Paragraph 64 the October 15, 2009 Order regarding the SAFNR Project. *Docket Nos. RR09-9-000, RR08-6-004, RR07-14-004*

14. November 20, 2010 – Petition for Approval of Corrected Reliability Standard FAC-010-2. *Docket No. RM08-11-000*

15. November 23, 2009 – Petition for Approval of Amendments to Rules of Procedure, Appendix 3A, Reliability Standards Development Procedure. *Docket No. RR10-4-000*

16. November 24, 2009 – Petition for Approval of Interpretations for TOP-005-1.1 Requirement R3 and IRO-005-2 Requirement R12. *Docket No. RM10-8-000*

17. November 30, 2009 – Third Quarter 2009 Compliance Filing in Response to Paragraph 629 of Order No. 693. *Docket No. RM06-16-000*

18. December 1, 2009 – Petition for Approval of Proposed Revisions to SPP Bylaws seeking approval of proposed amendments to Section 9.7.1. *Docket No. RR10-5-000*

19. December 1, 2009 – Compliance Filing of NERC and SPP in Response to the September 17, 2009 Order Accepting the Amendments to the SPP Bylaws. *Docket No. RR09-4-001*

20. December 1, 2009 – Comments in response to the NIST Smart Grid Cyber Security Strategy and Requirements (Draft NISTIR 76288)

21. December 2, 2009 – Petition for Approval of Interpretations to Reliability Standards MOD-001-1 Requirements R2 and R8 and MOD-029-1 Requirements R5 and R6. *Docket No. RD10-5-000*

22. December 2, 2009 — Informational filing of 2010-2012 Reliability Standards Development Work Plan. *Docket Nos. RM05-17-000, RM05-25-000 and RM06-16-000*

23. December 4, 2009 — Comments in response to FERC's National Action Plan on Demand Response. *Docket No. AD09-10-000*

24. December 11, 2009 – Compliance Filing in Response to October 15, 2009 Order on the 2010 Business Plan and Budget. *Docket Nos. RR08-6-005, RR07-14-005, RR09-9-001*

25. December 14, 2009 – Petition for Approval of Regional Reliability Standard BAL-502-RFC-02. *Docket No. RM10-*

26. December 18, 2009 – Compliance Filing in Response to FERC Order 716 regarding Revised VRFs for certain NUC-001-1 Requirements. *Docket No. RD10-7-000, RM08-3-000*

27. December 18, 2009 – Petition for Approval of VSLs to CIP Version 2 Reliability Standards. *Docket No. RD10-6-000*

28. December 22, 2009 – Petition for Approval of an Interpretation to CIP-006-2 Requirements R1.1 and R4. *Docket No. RD10-8-000*

29. *December 29, 2009* – Compliance Filing in Response to the September 30, 2009 Order Approving Revised Reliability Standards for Critical Infrastructure Protection. *Docket No. RD09-7-002*

30. *December 31, 2009* – Petition for Approval of Three EOP Reliability Standards, One Glossary Term, and Retirement of Five EOP Reliability Standards. *Docket No. RM10-16-000*

31. December 31, 2009 – Petition for Approval of Proposed New and Revised IROL Reliability Standards. *Docket No. RM10-15-000*

32. January 11, 2010 – Partial Compliance Filing of NERC in Response to Paragraph 36 of the October 15, 2009 Order on 2010 Business Plan and Budgets. *Docket Nos. RR09-9-002, RR07-14-006 and RR08-6-006*

33. January 19, 2010 – Compliance Filing in Response to December 17, 2009 FERC Order Regarding the CIP Implementation Plans for nuclear power plant generator owners and generator operators. *Docket No. RM06-22-010.*

34. January 26, 2010 – Response to the January 11, 2010 Request for Data and Documents concerning the November 13, 2009 Notice of Penalty filing regarding Turlock Irrigation District. *Docket No. NP10-18-000*

35. January 29, 2010 – Quarterly Report Regarding NERC's Reliability Standards Voting Results (October-December 2009). *Docket No. RR06-1-000*

Anticipated NERC Filings

1. February 28, 2010 – Fourth Quarter 2009 Compliance Filing in Response to Paragraph 629 of Order No. 693. *Docket No. RM06-16-000*

2. March 1, 2010 – NERC must submit a compliance filing on the Violation Severity Levels. *Docket Nos. RR08-4-000, et al.*

3. March 29, 2010 – Comments due in response to the Notice of Inquiry on the Transmission Loading Relief Reliability Standard. *Docket No. RM10-9-000*

4. March 29, 2010 – Comments due in response to the Notice of Inquiry on the Integration of Variable Energy Resources. *Docket No. RM10-11-000*

5. April 21, 2010 – NERC must submit a Compliance Filing in response to the January 21, 2010 Order Approving Technical Feasibility Exception Procedures (Appendix 4D)

Status of System Protection and Control Initiative

Action Required
Information Only

Background
Bob Cummings, Director of Event Analysis and Information Exchange, will present an update on the progress of the System Protection and Control Initiative.

Since its launch in April 2009, the System Protection and Control Initiative has achieved significant progress in a number of areas:

1. **Relay Loadability** — Standard PRC-023 — Relay Loadability, is awaiting FERC approval. FERC issued a notice of proposed rulemaking in July 2009, to which NERC provided significant comments.
2. **Protection System Reliability (Redundancy)** — the System Protection and Control Subcommittee (SPCS) produced a Technical Reference Document "Protection System Reliability — Redundancy of Protection System Elements," which was approved by the NERC Planning Committee in December 2008. That document was the technical basis for SPCS issuing a standards authorization request (SAR) for a new standard on protection system reliability.

   The SAR drafting team is in the process of addressing comments on the first posting of the SAR.
3. **PRC Standards Technical Support** — NERC Event Analysis staff and the SPCS members are providing additional subject matter expert support to a number of standards development projects related to system protection including, but not limited to:
   - System Protection Coordination
   - Disturbance Monitoring
   - Under Frequency Load Shedding
   - Transmission and Generation Protection System Maintenance and Testing
   - Transmission Protection System Misoperations
4. **Transmission and Generation Protection Coordination** — The SPCS produced a Technical Reference Document "Power Plant and Transmission System Protection Coordination" which was approved by the Planning Committee in December 2009. The document has been provided to the standard drafting team working on revisions to Standard PRC-001.

   This Technical Reference Document is a landmark document produced by the SPCS over the last two years. It is the culmination of Recommendation TR-22 "Evaluate and Implement Coordination Requirements for Generator Backup Protection Responses in Cohesive Generation Groups" of the 2003 Blackout report "Analysis of Transmission and Generation Performance August 14, 2003, Blackout" and the ongoing need for generation-transmission protection coordination demonstrated by findings of NERC Event Analysis. Of the 44 instances of causal or contributory protection system misoperations over the last three years, 12 have been due to generation-transmission protection miscoordination.

The SPCS is also producing a series of instructional workshops and webinars on protection coordination. The first workshop is being held on March 17–18 after the NERC Standing Committee meetings in Phoenix.

5. **Collaboration with the IEEE Power System Relaying Committee** — The "Power Plant and Transmission System Protection Coordination" Technical Reference document is subject of a significant collaboration with the IEEE Power System Relaying Committee (PSRC). The document does not prescribe how to protect transmission systems or generation; that is clearly defined in the IEEE Standards and Guides. Rather, the document is a bridging document between NERC standards and IEEE.

   A milestone was reached in the collaborative effort between NERC and the IEEE PSRC at their January 2010 meeting. The Rotating Machinery Subcommittee (J Subcommittee) elevated the Power Plant and Transmission System Protection Coordination Task Force (JTF3) to a working group. That task force collaborated with the NERC SPCS in the development of the NERC Technical Reference Document on coordination.

   The new IEEE PSRC working group (J3) will focus on reviewing the NERC Technical Reference Document for integration into the IEEE standards and guides, particularly C37.102 "IEEE Guide to AC Generator Protection." The working group will also provide feedback to NERC SPCS for potential improvements to our coordination document, continuing the collaboration. Similar efforts are ongoing in the Transmission Protection Subcommittee of the IEEE PSRC.

6. **System Performance and Protection Coordination with Turbine/Boiler Controls** — This effort has just begun in 2010 and is expected to result in another Technical Reference Document on the subject.

   The IEEE PSRC System Protection Subcommittee (C Subcommittee) has launched a task force for collaboration with the Power System Stability Controls Subcommittee (PSSC) of the PES Power System Dynamic Performance Committee (PSDP) at the 2011 Joint Technical Committee Meeting. NERC Event Analysis staff and the NERC System Protection and Control Subcommittee will be collaborating with the groups as a first step.

   Additional work with turbine and boiler controls is also starting up.