NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Agenda
Member Representatives Committee

May 6, 2008 | 1–5 p.m.
JW Marriott Orlando Grande Lakes
4040 Central Florida Parkway
Orlando, Florida
407-206-2300

Introductions and Chairman's Remarks

Antitrust Compliance Guidelines

*1. **Minutes**
- February 11, 2008 Meeting

*2. **Future Meetings**

Regular Agenda

*3. **Situation Awareness and Infrastructure Security**
   a. ES-ISAC Task Force Report
   b. Cyber Security Industry Notification System
   c. Situation Awareness and Infrastructure Security Program Report

*4. **Phasor Project — Discussion**

*5. **Revisions to Amended and Restated Regional Delegation Agreements — Discussion**

*6. **Update on Regulatory Matters — Information**

*7. **2009 NERC Business Plan and Budget — Discussion**

*8. **Wind Generation Integration — Discussion**

*9. **2008 Summer Assessment — Discussion**

*10. **2008 Long-Term Reliability Assessment — Discussion**
   a. Emerging Issues
   b. Assessment Improvement Initiatives

*11. **Follow Up to February 11 Discussion of NERC Priorities and Emphasis**

*12. **Reliability Metrics and Leading Reliability Indicators — Information Only**

*13. **Event Analysis and Information Exchange— Discussion**

*14. **Board of Trustees Nominating Committee Process --- Information Only**

15. **Comments by Observers**

16. **Upcoming Issues for Member Representatives Committee**
    a. Preview of July 2008 MRC Meeting Agenda

17. **Other Business**

Information Only — No Planned Discussion

***18. **Training, Education, and Personnel Certification**

*19. **Reliability Readiness Evaluation and Improvement**

* Background material included

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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.

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Draft Minutes
Member Representatives Committee

February 11, 2008 | 1–5 p.m.
Arizona Grand Resort
8000 South Arizona Grand Parkway
Phoenix, Arizona
877-800-4888

Member Representatives Committee Chair Steve Hickok called to order a duly noticed meeting of the North American Electric Reliability Corporation Member Representatives Committee on February 11, 2008 at 1 p.m., local time, and a quorum was declared present. The meeting announcement, agenda, and list of attendees are attached as **Exhibits A**, **B**, and **C**, respectively.

NERC Antitrust Compliance Guidelines

David Cook, vice president and general counsel, called attention to the NERC Antitrust Compliance Guidelines distributed with the agenda.

Minutes

The Member Representatives Committee approved the draft minutes of the October 22, 2007 meeting (**Exhibit D**).

Future Meetings

The Member Representatives Committee approved February 9–10, 2008 in San Diego, California as a future meeting date and location.

Introductions and Chairman's Remarks

Steve Hickok welcomed and introduced the new members on the MRC. He informed everyone that the cyber security data item was removed from the agenda.

He also explained that Terry Boston was elected to represent sector 4 and then moved to another organization which made him ineligible to represent sector 4. That vacancy and others would be filled through a special election (see next agenda item).

Elections

Chairman Hickok noted the certification of election of members of the MRC in the agenda packet. Further, he noted that vacancies exist in sectors 4, 7 and 12 of the MRC. NERC will conduct a special election to fill the vacancies. The plan will be to open the

nominations process promptly, and work to have the election completed before the MRC conference call anticipated for early April.

President Rick Sergel noted that the ISO/RTO sector had raised a concern that allowing non-ISO/RTO members such as vendors to join the sector created a possibility of the sector being represented by someone who was not from an ISO/RTO. Mr. Sergel explained that, although the bylaws permitted a vendor or consultant to join NERC in a sector to which it provides services, the purpose for which the sectors were created ─ balanced membership among stakeholder sectors ─ could be undermined if persons from entities not in the named sectors were nominated as representatives to the MRC. He assured the MRC that NERC would monitor the sector representation and would act so as to not let non-ISO/RTO members represent the ISO/RTO sector, and more generally provided the same assurance for all sectors.

Tom Berry, chairman of the Board of Trustees Nominating Committee presented the report of the committee to the MRC **(Exhibit E)**. The committee nominated Paul Barber, Janice Case, Jim Goodrich, and Fred Gorbet to serve three-year terms as independent trustees. The MRC unanimously elected the four trustees.

Definition of Adequate Level of Reliability

David Whiteley, executive vice president, reported on the status of the efforts to develop a definition of "adequate level of reliability" (ALR) (**Exhibit F**). The Board of Trustees will consider the definition of ALR as developed by the PC and OC at its February 12 meeting. Mr. Whiteley reported that, if it is approved, NERC's intention is to submit the definition to FERC and governmental authorities in Canada as part of an informational filing that will include the status of the integration efforts presently underway in the standards area.

Compliance Registry

David Hilt, vice president and director of compliance, provided an update on NERC's Compliance Registry (**Exhibit G**) and explained that the regional entities and NERC are striving to achieve consistency across all regions. The MRC also discussed the appeals process if an entity believes it should not have been included on the Compliance Registry.

Organization Certification

David Hilt presented a report on the status of work to revise how NERC deals with organization certification issues (**Exhibit H**).

TAPS Letter Regarding Transmission Owners and Operators Forum

Chairman Hickok asked Bill Gallagher to open the discussion of the letter from the Transmission Access Policy Study Group to Rick Sergel and the NERC Board regarding the Transmission Owners and Operators Forum.

Bill Gallagher explained his advocacy that the Transmission Forum be opened to observers from other stakeholder groups, believing that its current closed meetings and membership (excluding all but transmission owners and operators) is inconsistent with NERC's broad operating principles of openness and inclusiveness.

Chairman Hickok asked David Cook to speak on the matter of consistency with NERC's Rules of Procedure. Mr. Cook explained that, when the board approved the charter for the Transmission Forum, it considered the matter of the membership restrictions, and concluded they were appropriate. Creation of the Transmission Forum is authorized by Rule 712 of the Rules of Procedure, and NERC included the Transmission Forum charter as part of its July 20, 2007 compliance filing in response to FERC's ERO certification order. On November 2, 2007, FERC approved the compliance filing without discussing this specific issue.

Members of the MRC and observers presented various views on who should be allowed to attend Transmission Forum meetings and whether the Forum should continue to operate under the NERC umbrella or operate completely on its own.

Discussion of NERC Priorities and Emphasis in 2008

Chairman Hickok initiated the discussion of NERC priorities and emphasis for 2008. The discussion focused on five topics, with NERC staff members presenting a brief introduction to each (**Exhibit I**).

1. Reliability standards development
2. Compliance monitoring and enforcement
3. Short and long range adequacy assessments
4. Adequacy and reliability levels
5. NERC-FERC-Provinces relationship

David Taylor, manager of standards development, began the discussion of reliability standards development. Joe McClelland, Director of the Office of Electric Reliability of the Federal Regulatory Commission, and Robert Snow, a senior engineer in the Office of Electric Reliability, made a presentation on the subject **(Exhibit J)**. Thereafter, Armando Perez and Scott Helyer led the MRC in a discussion of the issues.

David Hilt, vice president and director of compliance, began the discussion of compliance monitoring and enforcement. Thereafter, Paul Murphy and Scott Moore led the MRC in a discussion of the issues.

David Nevius, senior vice president and director of reliability assessment and performance analysis, began the discussion of short and long range adequacy assessments. Thereafter, Steve Naumann and Mike Smith led the MRC in a discussion of the issues.

David Nevius also began the discussion of adequacy and reliability levels. Thereafter, Stewart Ramsay led the MRC in a discussion of the issues.

David Cook began the discussion of the relationships among NERC, FERC, and the Provinces. Thereafter, Bill Gallagher and Carmine Marcello led the MRC in a discussion of the issues.

Comments by Observers

Eli Turk (Canadian Electricity Association) stated that CEA is pleased that Ric Cameron is working with NERC as Canadian Affairs Representative. CEA strongly supports the work NERC is doing.

Jim Fama (Edison Electric Institute) appreciated the discussion on long term reliability. He stated the long-term reliability assessment is an important document, and that the roll-out of the document went very well. He further expressed appreciation for the excellent job done by Rick Sergel and the degree of credibility in the document. The document is the "state of union" on resource adequacy.

David Mohre (National Rural Electric Cooperatives Association) agreed with Jim Fama, and reiterated kudos to Rick. He expressed that many of the state leaders went for it. He asked that everybody read section 215 of the Federal Power Act again and develop appropriate rules of engagement.

Upcoming Issues for Member Representatives Committee

Chairman Hickok forecast some of the items that are expected for the May 6, 2008 MRC meeting agenda, including the summer reliability assessment, issues for next long term reliability assessment, and the first draft of the business plan and budget for 2009. He will schedule a conference call in early April to preview the May 6 agenda.

Adjournment

There being no further business, Chairman Hickok adjourned the meeting at 5:30 p.m.

Submitted by,

David Whiteley
Secretary

Agenda Item 2
MRC Meeting
May 6, 2008

Future Meetings

MRC Action Required

Approve May 5–6, 2009 (T–W) in Washington, D.C. as a future meeting date and location
Change February 9–10, 2009 meeting location from San Diego, California to Phoenix, Arizona

Information

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

- July 29–30, 2008 — Montreal, Quebec, Canada (T–W)
- October 28–29, 2008 — Washington, D.C. (T–W)
- February 9–10, 2009 — San Diego, California (M–T)

Agenda Item 3a
MRC Meeting
May 6, 2008

ES-ISAC Task Force Report

MRC Action Required
Discussion

Information
At its October 23, 2007 meeting the board formed a joint task force to consider issues surrounding the governance structure and NERC's overall role in the Electricity Sector Information Sharing and Analysis Center (ES-ISAC). The task force comprises representatives from the board and the Member Representatives Committee.

The task force first identified a set of core principles, purposes, and functions for the Electricity Sector Coordinating Council (ESCC) and the ES-ISAC. These core principles, purposes, and functions determine the tone and direction for the ESCC and for ES-ISAC operations. Consideration of these core principles, purposes, and functions helped form the task force's view on the desired outcomes of NERC efforts in this area. The task force then reviewed the existing ESCC and ES-ISAC structure, staffing, and operations to clarify the need, role, and operation of NERC's involvement in the ESCC and the ES-ISAC. With this information and discussion involving ES-ISAC leadership, the task force was able to identify two conclusions and recommendations:

> **Task Force Conclusion #1** – NERC's existing role in the operations of the ES-ISAC fits the core principles, purposes and functions as identified by the task force and should continue. NERC should periodically review the type, amount, and level of resources necessary to adequately perform the operations role of the ES-ISAC and recommend changes to the Board of Trustees as appropriate. Furthermore, to the extent that the scope of operations need to expand beyond the bulk power system, then NERC and its partners in industry and government will consider alternative structures.
>
> **Task Force Conclusion #2** – The existing role of the ESCC is appropriate for providing guidance to the ES-ISAC operations and should continue. However, in order to enhance strategic and policy guidance to the ES-ISAC, and in order to provide strategic and high level policy guidance and broad electricity sector participation and support on critical infrastructure security matters, including matters beyond the bulk power system, executive level participation from the stakeholder sectors needs to be added. The task force recommends that this be done by the following:
>
> The ESCC to be directed by an Electricity Sector Steering Group (ESSG) comprising the following seven members: one member from the NERC Board of Trustees, the NERC CEO, and five CEO level executives named by the NERC MRC.

Attachment 1 is a copy of the complete task force report. The task force will request the NERC Board of Trustees approve these recommendations during its May 7, 2008 meeting.

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NERC Task Force on the Electricity Sector Coordinating Council and Information Sharing and Analysis Center

Report and Findings

At the October 23, 2007 NERC Board of Trustees meeting, the Board formed a task force to consider the issues of the governance structure and NERC's overall role in the Electricity Sector Information Sharing and Analysis Center (ES ISAC). The task force was formed as a joint task force with representatives from the Board and Member Representatives Committee. Members of the Task Force are shown in Attachment 1.

History

The electricity sector information sharing and analysis center formed first, then the electricity sector coordinating council.

In May 1998, Bill Clinton issued Presidential Decision Directive (PDD 63), which called for government agencies to build private sector partnerships to help protect the country's critical infrastructures. PDD 63(and later Homeland Security Presidential Directive 7 issued by President Bush in December 2003 and the Department of Homeland Security's National Infrastructure Protection Plan in 2006) recognized the Department of Energy as the sector specific agency for energy including production, refining, storage, and distribution of oil and gas, and electric power (except for nuclear power facilities). In this role, DOE collaborates with Federal agencies, state and local governments, tribal organizations, and the private sector.

In September 1998, NERC agreed to be the electricity sector coordinator and to operate the Electricity Sector's Information Sharing and Analysis Center (ES ISAC). The ES ISAC was formed and its operations centered around open participation by all electricity sector participants. The Electricity Sector Coordinating Council (ESCC) was later established to provide overall strategic leadership in the critical infrastructure protection arena. At the time, the NERC Critical Infrastructure Protection Committee (CIPC) was the most logical group to form the core of this leadership role. Recognizing the need to supplement this core leadership, CIPC's Executive Committee, along with NERC's CEO and representatives from EEI, APPA, and NRECA, agreed to serve as the ESCC. The ESCC meets from time to time with its peer public sector group, the Government Energy Coordinating Council (with representatives of federal, state, local and tribal governments) and chaired by the U.S. Department of Energy as the energy sector lead, to discuss policy and strategic critical infrastructure protection, response and restoration issues. In addition to providing expert advice, leadership and support, CIPC has guided the direction and growth of the ES ISAC operations.

Additionally, NERC's CEO and the CIPC chairman represent electricity sector interests on the Partnership for Critical Infrastructure Security. This private-sector group brings together the sector coordinating council's leadership across critical infrastructures for policy discussion and coordination purposes.

The ES ISAC began operations in 1999 with it primary focus on Y2K issues and potential terrorism attacks on the electric transmission system. It began as a small operation staffed by NERC personnel based in Princeton. The on-duty personnel carried pagers and cell phones in non-business hours. Regular conference calls were held with government partners and electricity industry experts to prepare for Y2K and cyber security threats. The role of the ES ISAC grew after September 11, 2001 to emphasize physical security, and maintain an "all-hazards, all-threats" perspective.

Following creation of the US Department of Homeland Security (DHS) in 2002, DHS became the lead US government agency for developing and implementing strategies for critical infrastructure protection and for building and maintaining the public-private partnership. The US Federal Energy Regulatory Commission (FERC) has been one of the federal agencies on the Government's Energy Coordinating Council since it began. This group includes all government energy sector partners and has facilitated cooperation and increasing coordination. FERC's role expanded with the passage of the Energy Policy Act of 2005 when section 215 of the Federal Power Act was amended giving FERC greater oversight and regulatory authority over the bulk electric power system. The relationship between FERC's role on the government energy sector coordinating council and NERC's role on the private sector electricity sector coordinating council became closely linked when NERC was designated as the Electric Reliability Organization in 2006.

Canadian participation in the ES ISAC was initiated by the active participation of Canadian representatives in the Critical Infrastructure Protection Advisory Group and CIPC. The ES ISAC has worked to maintain a good working relationship with Public Safety Canada (PSC) and a PSC representative is invited to attend CIPC meetings. Canadian contacts are kept on the ES ISAC distribution lists to assure cross border coordination.

Core Principles, Purposes and Functions of ESCC and ES ISAC

The task force identified a set of core principles, purposes and functions for the ESCC and the ES ISAC. The task force believes these core principles, purposes and functions determine the tone and direction for the ESCC and for ISAC operations. Consideration of these core principles, purposes and functions also helped form the task force's view on the desired outcomes of NERC efforts in this area.

Participation

- Full North American electric industry participation, including NERC.

- Industry participation by technical experts in the field to support and guide operational aspects.
- Industry participation at executive level to provide strategic guidance, direction and access to required resources.

Independence

- Separation from NERC standards and compliance enforcement functions.
- Positioned to be able to take appropriate actions in response to information provided to the ESCC or ES ISAC.
- Positioned to coordinate activities with federal and provincial government authorities in the US and Canada.

Capability

- Capability to respond to all critical infrastructure (cyber and physical) security matters and issues raised by federal government agencies, including matters beyond the bulk power system. (ES ISAC)
- Capability to communicate rapidly and effectively with all electricity sector members. (ES ISAC)
- Sufficient processes and procedures in place to carry out its functions. (ES ISAC)
- Ability to evaluate critical infrastructure threats and vulnerabilities, and develop strategic and tactical mitigation measures. (ESCC and ES ISAC)
- Ability to participate in critical infrastructure policy discussions at DHS or other federal agencies. (ESCC)
- Ability to coordinate electricity sector activities with other key related sectors, such as nuclear, oil and gas, dams, and telecom. (ESCC)
- Ability to discuss and exchange information confidentially, both internally and with government agencies. (ESCC and ES ISAC)

Resources

- Dedicated staff and funding, including necessary industry resource commitment.

Existing ESCC and ES ISAC Attributes

Given the core principles, purposes and functions described above, the task force reviewed the existing ESCC and ISAC structure, staffing and operations to clarify the need for, role and operation of NERC's involvement in the ESCC and the ES ISAC.

ESCC

1. **Governance**: The ESCC is self-organized, inclusive and broadly representative of the electricity sector, with active participation of owners and operators. Given the integrated nature of the North America electricity grid, the ESCC includes representatives from Canada.
2. **Representation**: ESCC representatives are members of the electricity sector who either personally have the credibility to influence others, or are representatives of institutions with such credibility. ESCC members provide the leadership and networks of communication and influence across the sector to enable differing and consensus discussions, and bring to bear practical operational experience as necessary.
3. **Outreach and Sector Education**: The ESCC is able to reach out broadly across the electricity sector to seek input, share ideas and take the action necessary to achieve the goals of the ESCC.
4. **Focus**: As part of maintaining electricity grid reliability, the ESCC is focused on matters related to the electricity industry's contribution to public safety, homeland security and critical infrastructure protection, including collaboration with the Department of Energy, Department of Homeland Security, Federal Energy Regulatory Commission, and Canadian authorities to:
    - Identify, prioritize and coordinate initiatives to enhance the protection and reliability of the electricity grid,
    - Collaborate with other critical infrastructure sectors to better understand and address interdependencies, and
    - Provide oversight and guidance to the ES ISAC.

ES ISAC

1. **Governance**: Oversight and overall program direction is provided by the ESCC.
2. **Function**: Share information related to operational emergencies affecting grid reliability, physical and cyber threats, vulnerabilities, incidents, potential protective measures and effective practices. Coordinate with industry owners and operators to facilitate response and recovery activities and communication following an incident or event. Collect information on the status of distribution related problems when requested by government agencies. Currently, NERC operations cover only the bulk power system. There is a gap with respect to the remainder of the electric system in that non-bulk power system facilities are not covered by ES ISAC operations.
3. **Capability**: The ES ISAC has the necessary technical skills, responds to incidents and events on a 24x7 basis, and has processes in place to acquire additional resources from the electricity industry to respond to emergencies.
4. **Confidentiality**: Receive and share information, recognizing confidentiality concerns, with the electricity industry, other critical infrastructure sectors,

governments at the state, national, and international level and the public, where necessary and as appropriate.

Options for Enhanced Operation of the ES ISAC

The task force considered whether or not modifications to the ES ISAC would enhance the function or improve the results achieved. In doing so, the task force considered the following options:

- Replace NERC as the operator of the ES ISAC day-to-day function. Another organization would be found to take on this role or a new organization would be formed. Significant issues to be resolved are organization, governance, and funding.
- Leave the ES ISAC operation and NERC's role as it is today, but provide additional resources as necessary.

Task Force Conclusion #1 *– NERC's existing role in the operations of the ES ISAC fits the core principles, purposes and functions as identified by the task force and should continue. NERC should periodically review the type, amount and level of resources necessary to adequately perform the operations role of the ISAC and recommend changes to the Board of Trustees as appropriate. Furthermore, to the extent that the scope of operations need to expand beyond the bulk power system, then NERC and its partners in industry and government will consider alternative structures if needed to the one in place today.*

Options for Enhanced Operation of the ESCC

The task force also considered whether or not modifications to the ESCC would enhance the guidance to the ES ISAC or improve strategic direction and coordination of electricity sector interaction with the Federal government on critical infrastructure protection and homeland security. In doing so, the task force considered the following options:

- Revise ESCC membership structure to **replace** the existing membership with executive level representation from stakeholder sectors.
- Revise the ESCC membership to **add** executive level representation from stakeholder sectors to the existing membership.
- Create a new Electricity Sector Executive Steering group with executive representation from stakeholder sectors to direct the existing ESCC.
- Leave ESCC membership and ES ISAC governance as is.

Task Force Conclusion #2 *– The existing role of the ESCC is appropriate for providing guidance to the ES ISAC operations and should continue. However, in order to enhance strategic and policy guidance to the ES ISAC, and in order to provide strategic and high level policy guidance and broad electricity sector participation and support on critical infrastructure security matters, including matters beyond the bulk power system, executive level participation from the stakeholder sectors needs to be added. The task force recommends that this be done by the following:*

The ESCC to be directed by an Electricity Sector Steering Group (ESSG) comprised of the following 7 members

1. *One member from the NERC Board of Trustees*
2. *The NERC CEO*
3. *Five CEO level executives named by the NERC MRC*

The CIPC Chairman and vice-chairman would be invited to attend the ESSG meetings.

The ESSG will provide policy guidance and participate as necessary in meetings with Government agencies.

The ESCC would continue in its present form and membership.

The ESCC will continue to delegate day-to-day activities to the ISAC and CIPC as necessary and appropriate to meet the operations requirement of the ES ISAC.

The Steering Group will likely meet on a quarterly, or as-necessary to guide urgent matters.

The CIPC Chairman, supported by NERC staff, will provide periodic updates to Steering Group members regarding current activities and emerging issues.

Attachment 1

ES ISAC Task Force Members

Paul Barber	Trustee	**Dave Goulding**	MRC member
Jim Goodrich	Trustee	**Scott Moore**	MRC member
Rick Sergel	Trustee	**Mike Smith**	MRC member

Participating Subject Matter Experts

Stuart Brindley	Former CIPC Chairman
Barry Lawson	CIPC Chairman
Jim Fama	EEI
Lynn Costantini	NERC staff
Stan Johnson	NERC staff
David Whiteley	NERC staff

Agenda Item 3b
MRC Meeting
May 6, 2008

Cyber Security Industry Notification System

MRC Action Required
Discussion

Information
One of the learnings from the 2007 Aurora situation was the lack of a method for the ES-ISAC to issue alerts to the electricity sector in a timely, coordinated, and complete manner. To address this need, NERC will use the NERC Compliance Registry while a task force develops a longer-term solution.

A drill is being scheduled for early May to exercise the interim system. The task force's goal is to have the new Industry Notification System (INS) operational in June, with the help and support of the trade associations and regions to compile a complete list of contacts which will be maintained by the ES-ISAC. The owners and operators on the Compliance Registry will be requested to supply the proper contact(s) for use in the parallel, but separate and distinct, Cyber Security Industry Notification System.

Agenda Item 3c
MRC Meeting
May 6, 2008

Situation Awareness and Infrastructure Security Program Report

MRC Action Required
None

Information
The Situation Awareness and Infrastructure Security Program is a combination of awareness of conditions on the bulk power system and the initiatives necessary to increase the physical and cyber security of the electricity infrastructure. This program has three functions: the Electricity Sector Information Sharing and Analysis Center; security planning; and operating reliability support services.

Electricity Sector Information Sharing and Analysis Center (ES-ISAC)
This is a virtual, continuously-staffed, around-the-clock operation. The program works with government agencies in Canada and the United States as well as the interdependent infrastructures to share information in order to enhance incident management. A joint task force of the board and Member Representatives Committee is presently evaluating the governance of the ES-ISAC and will present its recommendations at the May meeting.

Security Planning
This function increases the physical and cyber security of the bulk power system by assessing threats and hazards. Using risk management principles, security planning develops, updates, and maintains security guidelines and other important procedures for the industry. Where appropriate, a standard development process is initiated. The program metric is shown below.

Security Guidelines

Years since update/issue	Number
Less than 1	7
1–2	2
3–5	10
More than 5	0

The goal is to update each guideline on a three-year cycle.

Operating Reliability Support Services
This function supports 10 tools used by the reliability coordinators and other system operators. The program also develops new tools for use in the monitoring and control of the bulk power system. The tools currently in use include:

- Transmission Services Information Network (TSIN)
- Interchange Distribution Calculator (IDC)
- Interregional Security Network (ISN)
- Real-Time System Power Flows
- System Data Exchange (SDX)
- Central Repository for Curtailment Events (CRC)
- Reliability Coordinator Information System (RCIS)
- Area Control Error and Abnormal Frequency System Monitoring
- NERC Hotline

Agenda Item 4
MRC Meeting
May 6, 2008

Phasor Project

MRC Action Required
Discussion

Information
The Phasor Project, now known as North American SychroPhasor Initiative (NASPI) is in a transition phase for its leadership and funding. During its two-year development, technology has been funded jointly by the electricity sector and the government, primarily the United States Department of Energy. The view ahead indicates the government funding will shift to more application research while the implementation and operational costs will need to be funded by the users of the phasor information. Also, the technology has matured to where more of the devices should be connected in a network to supply the operators of the bulk power system with a greatly improved wide-area view of the system. NERC believes a project manager is needed to guide the technology through the critical next one- to two-year period. This will include developing a business plan for the system as well as gaining favorable regulatory treatment for expenditures. In addition, the seminal financial support required to develop the emerging technology by TVA needs to be replaced by funding from a broader industry base.

Two other tools under development are:

- North American SynchroPhasor Project
- Event Logger and Tracking System

Cyber Security Standards CIP 002–009
FERC approved the eight cyber security standards on January 17, 2008. The 221-page decision directs NERC to develop a work plan to accomplish numerous changes in the standards and to develop guidance in numerous areas.

Cyber Vulnerability Advisory Issued
An ES-ISAC Advisory regarding cyber vulnerability was issued in late June 2007. The U.S. House of Representatives Homeland Security Subcommittee held a hearing on October 17. FERC has been conducting interviews of owners and operators to determine the industry's response to the advisory.

Agenda Item 5
MRC Meeting
May 6, 2008

Revisions to Amended and Restated Regional Delegation Agreements

Action: Discussion Only

Background

On March 21, 2008 FERC approved the amended and restated regional delegation agreements and a revised Compliance Monitoring and Enforcement Program that NERC and the eight regional entities had filed in October 2007 in compliance with FERC's April 19, 2007 order conditionally approving the original delegation agreements (122 FERC ¶ 61,245 (2008), the "March 21 Order"). In the March 21 Order, FERC approved the amended and restated regional delegation agreements, as filed, to be effective April 5, 2008, and directed further changes in the *pro forma* delegation agreement, in the individual delegation agreements, and in NERC's Rules of Procedure, including the uniform Compliance Monitoring and Enforcement Program that is Appendix 4C to NERC's Rules of Procedure. A summary of the specific changes FERC required is included as an attachment to this agenda item. NERC's compliance filing is due July 21, 2008. NERC and the regional entities expect to circulate a draft of the response to the March 21 order about April 30 for discussion.

NERC and the regional entities have agreed to the following procedural schedule for addressing the compliance filing:

April 30	Circulate drafts of proposed responses for discussion at MRC meeting
May 6	Discussion of proposed responses at MRC meeting
May 10	Post draft of proposed responses for 30-day comment period
June 17	NERC and regions meet face-to-face to complete the revisions
July 10 (no later than)	Regional approvals of revisions to delegation agreements
July 15	NERC BOT approval of revisions to delegation agreement and rules of procedure
July 21	File at FERC

In addition to the compliance filing regarding all the delegation agreements that is due July 21, FERC also identified an issue that affects only FRCC and NPCC. The compliance filing addressing that issue is due May 20, 2008. FERC said that NERC and FRCC must submit a report either outlining their proposed termination of the stakeholder compliance committee review process within the FRCC compliance program or, in the alternative, justifying its continuation. FERC said that NERC and NPCC must submit a report either outlining their proposed termination of the technical committee review process within the NPCC compliance program or, in the alternative, justifying its continuation. NERC, FRCC, and NPCC are developing those reports.

FERC Order March 21, 2008 on
Delegation Agreements and Compliance Enforcement Program
NERC and Regional Entity Compliance Items
(Filing due July 21, 2008 unless otherwise indicated)

I. Pro Forma Delegation Agreement ("RDA")

Allocations of costs based on Net Energy for Load

1. NERC is to further revise §8(b) of the RDA and Exhibit E, §2 so that a proposed change in cost allocation formula may be submitted in advance of the annual Business Plan & Budget ("BP&B"), not to be effective until the following BP&B are in effect. (P 25)

Regional Advisory Body budgets and funding

2. When NERC reports WIRAB's total approved funding, NERC must include breakdown of total funds allocated by country and an explanation of how WIRAB's funding affects allocation and collection of costs to WECC end users in U.S. [*No revisions to RDA and no compliance filing required.* However, consider adding this point to the agreement text as a "reminder."] (P 27)

Regional Entity deviations from NERC system of (balance sheet) accounts

3. NERC must file with FERC, for informational purposes, any waiver NERC grants to a Regional Entity to deviate from balance sheet accounts in the NERC System of Accounts along with an explanation supporting the waiver. [*No revisions to RDA and no compliance filing required*. However, consider adding this point to the agreement text as a "reminder."] (P 31)

II. NERC Compliance Monitoring and Enforcement Program ("CMEP")

Compliance Audits and Investigations (CMEP §3.0)

4. §3.1.3 should be modified to specify NERC and FERC will receive notice of an unscheduled Compliance Audit on or before the date the entity to be audited is notified. (P 39)

5. §3.0 should be modified to clarify the circumstances in which the Compliance Enforcement Authority ("CEA") can utilize the "accuracy and completeness" review process. Further, the accuracy and completeness review process should *not* take place *before* the CEA submits its report of Alleged Violation to NERC. (P 40)

6. §3.3 should be modified to provide the opportunity for an audited entity, in the case of a spot check, to object to a compliance auditor (other than a NERC or FERC staff member). (P 41)

7. NERC and Regional Entity Compliance Audits conducted in the U.S. must be consistent with GAO standards, specifically "professional accounting standards recognized in the U.S., such as Generally Accepted Accounting Standards, Generally Accepted Government Auditing Standards, and standards sanctioned by the Institute of Internal Auditors." (P 42 & fn 29)

8. §3.4 should be revised to provide that where an "applicable governmental authority" commences an investigation into a U.S.-related matter, NERC must provide notice of the investigation to FERC prior to disclosure of any information relating to the matter to the applicable governmental authority. Also, NERC's notice must disclose the nature of the proposed disclosure and the procedures to be used to ensure compliance with the requirements of 18 CFR 39.7(b)(4). (P 45)

9. §3.4 – NERC's proposed changes to §3.4 and other provisions of the CMEP in which NERC would permit itself, prior to obtaining FERC's permission, to disclose non-public U.S. compliance information covered by 18 CFR 39.7(b)(4) to Canadian or Mexican governmental authorities are **rejected**. (P 47)

    a. Specifically, changes of text that currently permit the submission of non-public compliance information to "the Commission *or* Applicable Governmental Authorities" to require submission of the information to "the Commission *and* any other Applicable Governmental Authority" are **rejected,** because absent appropriate procedures to protect the non-public nature of U.S. compliance-related information, public disclosure of the information could occur in violation of 18 CFR 39.7(b)(4).[1] FERC lists these CMEP sections as including such changes (P 47 fn 3):

        8.0 (2d par.) (notice of evidence or allegations of violations)

        3.1.6 (providing final compliance audit reports)

        3.4.1 step 12 (notice that an investigation concluded no violation occurred)

        5.1 (notification of issuance of notice of alleged violation)

        5.6 (filing of notice of penalty which may contain non-public information)

[1] Since these changes in the revised CMEP are rejected, they must be undone in the compliance filing. Presumably, the text should be restored to "the Commission or Applicable Governmental Authorities". This may also necessitate other changes in the CMEP including to the definition of "Applicable Governmental Authorities."

8.0 (6th par.) (quarterly reports on status of alleged and confirmed violations)

b. NERC's proposal is overbroad and requires further clarification. It is unclear if NERC would provide notice of all Regional Entity reports of alleged violations, compliance audit reports, notices of alleged violations and quarterly updates to Canadian and Mexican authorities regardless of whether these reports address matters pertaining to particular Canadian or Mexican portions of the Bulk-Power System. (P 48)

c. It is unclear if NERC would provide these reports and information to each Canadian or Mexican regulatory authority with jurisdiction over reliability or solely to those authorities that might have an interest in a particular report. (P 49)

d. NERC does not indicate if it intends to provide to FERC "reciprocal reports" of compliance information relating to Canadian or Mexican entities that might affect the U.S. portion of the Bulk-Power System. (P 49)

e. NERC does not describe how it would protect the non-public nature of information it would provide to Canadian and Mexican authorities. (P 49)

Appeals (CMEP §5.5) and Notice of Penalty (CMEP §5.6)

10. §5.5 and 5.6 should be amended to delete the qualifiers "clearly conflicts with the goal of consistent national reliability enforcement" and "where the requirement to revise the decision is necessary for NERC's oversight of Regional Entity compliance activities." (P 60)

11. NERC should work with Regional Entities and other interested parties to propose language changes "consistent with our findings herein" on the issues of (i) why the reopening of proceedings by a participant would be appropriate in all instances in which NERC has directed a Regional Entity to revise a decision, and (ii) why a "participant" other than the Registered Entity to whom the penalty was assessed, or the compliance staff, should have the right to reopen a proceeding. The limitations suggested by EEI/NRECA have merit and should be considered.

12. The proposal NERC made in its Answer to add, to §5.5, the §5.6 phrase "irrespective of whether the issue was previously litigated, settled or opposed" is neither accepted nor rejected (*see* P 59); apparently, it should be considered as part of the P 61 directive.

Mitigation of Violations (CMEP §6.0)

13. §6.5 – NERC's proposed revision to §6.5, as amended in its Answer (*i.e.*, to state that NERC will be given 30 days to complete its review of a Mitigation Plan), is accepted. (P 70)

14. §6.5 & Figure 6.1 – NERC's proposal in its Answer to conform Figure 6.1 to the text of §6.5 is accepted. (P 70)

15. §6.5 & ROP §400 – It is unclear if ROP §400 is consistent with NERC's revisions to §6.5 to comply with the directives in the *Mitigation Plan Order*. (P 70)

    a. ROP 404.2 refers to the submission of a Mitigation Plan to NERC by an owner, operator or user of the Bulk-Power System or a regional reliability organization when NERC finds such an entity to be noncompliant, but does not cover NERC's review of Mitigation Plans approved by Regional Entities, and so must be revised. (P 70 fn 39)

    b. The reference to "regional reliability organizations" in ROP §400 is outdated and should be revised. (P 70 fn 39)

Remedial Action Directives (CMEP §7.0)

16. §7.0 – NERC must revise this section to include a means for ensuring that a Registered Entity receives actual notice of a Remedial Action Directive and for ascertaining that date on which actual notice occurs. NERC should also revise P 1.9.1 of the Hearing Procedures to refer to a Registered Entity's actual receipt of a Remedial Action Directive. (P 73 and fn 41)

NERC Hearing Procedures (CMEP Attachment 2)

Editorial Corrections

17. P 1.4.6 – in the third sentence, delete "in" following the phrase "in regard to". (P 75 fn 43)

18. P 1.4.10 – substitute "all" in place of "both" in the phrase "may exercise its discretion to examine the actions of both Registered Entities." (P 75 fn 43)

Definitions

19. Definitions and ROP 1501.3 – NERC should adopt the revised definition of "Critical Energy Infrastructure Information" in accordance with FERC's recent amendment of this term in Order No. 683 (see 18 CFR §388.112(c)(1)). (P 75)

20. P 1.1.5 ("Respondent") – this definition should be revised to include a Registered Entity that is the subject of a contested Remedial Action Directive. (P 79)

21. P 1.1.5 – a definition of "document" should be added. (P 80)

Proceedings Closed to the Public (P 1.2.13)

22. P 1.2.13 – FERC construes the authorization for NERC to publicly release information relating to a non-public proceeding to refer only to the limited circumstances previously authorized by FERC – consider putting this clarification into the text of P 1.2.13. (P 86)

Hearing Requests (P 1.3.1)

23. P 1.3.1 – FERC clarifies that this paragraph allows a Registered Entity to request a hearing only where the compliance staff rejects a revised Mitigation Plan submitted by the Registered Entity – consider putting this clarification into the text. (P 87)

24. P 1.3.1 – This paragraph should be revised to state that if a party seeks the full hearing procedure it must ask for it. (April 19 Order at P 161) (P 89)

Shortened Hearing Procedures (P 1.3.2)

25. P 1.3.2 – the time periods for compliance staff to produce documents for copying under the shortened hearing procedure should be the same time period as under the full hearing procedure. (P 92)

Notice of Hearing (P 1.4.1)

26. P 1.4.1 – the requirement that the notice of (initial) hearing issued by the Regional Entity clerk must include a statement that the Registered Entity can request either the shortened hearing procedure or the full hearing procedure, can be deleted. (P 93)

Interlocutory Review (P 1.4.4)

27. P 1.4.4 should be clarified to state the content and purpose of the Hearing Officer's report that is to be issued when a petition for interlocutory review is filed. (P 98)

28. P 1.4.3 and 1.4.4 should be revised to state the standard to be applied by the Hearing Body in considering a petition for interlocutory review; although the FERC standard need not be adopted, there must be some limitations on the right to seek interlocutory review in order to deter unduly dilatory maneuvers by litigants. (P 98)

Ex Parte Communications (P 1.4.5 and 1.4.7)

29. P 1.4.7(d) should be revised to specify that a notice that an *ex parte* communication has occurred shall include a listing of each person who made or received the prohibited communication. (P 101)

Experts (P 1.5.6)

30. P 1.5.6 (requiring an expert to sign a confidentiality agreement) is **rejected** as unnecessary, because (i) the hearings will generally be closed to the public; (ii) P 1.5.10 has provisions for protective orders applicable to "participants", and (iii) FERC construes "participant" to include experts. NERC may further support the need for this provision in its compliance filing; if it does so, NERC must explain (i) why separate confidentiality agreements are necessary for experts, versus participants, and (ii) the meaning of the phrase in P 1.5.6 "appropriate to the level of involvement in the proceeding." (P104)

Documents Made Available for Inspection and Copying (P 1.5.7(a))

31. P 1.5.7(a)(1) and (2) should be revised to require compliance staff to produce documents prepared or obtained through any compliance process, not just through an "investigation". (P 108)

32. P 1.5.7(a) should be revised to specify that compliance staff need not make available to a participant exact copies of documents the participant previously provided to compliance staff. (P 108)

33. P 1.5.7(a)(1) provision that specified documents will be made available "unless otherwise provided by this Rule" is ambiguous and unsupported and should be either explained or deleted. (P 108)

34. P 1.5.7(a) – in proceedings with participants other than the Registered Entity and compliance staff, the Hearing Officer or Hearing Body should oversee compliance staff's proposed designation of documents and the execution and enforcement of the protective order. [FERC does not direct any changes here, but consider whether amendment of P 1.5.7(a) is appropriate to express this point in the Hearing Procedures.] (P 110)

Withholding of Documents (P 1.5.7(b) and (c))

35. P 1.5.7(b)(2) should be revised to provide that compliance staff's obligation to make exculpatory evidence available does not operate as a limitation on the privileges specified in P 1.5.7(b)(1). (FERC also notes that the work product doctrine is absolute and the work product doctrine permits disclosure of attorney work product only on a showing of substantial need.) (P 113)

36. P 1.5.7(c) should be revised to provide (i) compliance staff is obligated, in every case without exception, to compile a list of documents withheld, without the need

for a motion or involvement of the Hearing Officer; (ii) this list must be provided by compliance staff at the time it is required to make documents available; (iii) this obligation also applies to a Respondent that is required to make documents available. (P 114)

Failure to Produce Documents (P 1.5.7(g))

37. P 1.5.7(g) should be revised to provide that where compliance staff fails to produce documents it was required to produce, the burden of proof to show absence of harm to Respondent's case is imposed on compliance staff (or on whatever party fails to produce a required document – see next item). (P 117)

38. P 1.5.7(g) should be revised to apply to any participant that fails to produce a document it was required to produce, not just compliance staff. (P 117)

Discovery Procedures (P 1.5.8)

39. P 1.5.8 should be revised to eliminate requirement that a prehearing discovery conference be held in every case. (P 124)

40. P 1.5.8 should be revised to eliminate reference to discovery practices of "civil courts." (P 124)

41. P 1.5.8 should be revised to include standard discovery procedures and timelines; NERC may adopt or incorporate by reference FERC's procedures for discovery in hearings before ALJs. (P 124)

Protective Orders (P 1.5.10(b))

42. P 1.5.10(b) should be clarified as to the scope of documents subject to it ("e.g., with an appropriate cross reference to paragraph 1.5.7(b)(1)"). (P 127)

43. Documents protected from disclosure by P 1.5.7(b)(1) will only be produced if compliance staff voluntarily agrees to do so, if they are redacted to remove protected information, or if non-protected portions of the documents are required to be produced as exculpatory evidence. [FERC does not direct specific revisions on this point, but consider whether this point should be made explicit in P 1.5.7(b)(1) or P 1.5.10(b).] (P 127)

Burden of Persuasion and Receipt of Evidence (P 1.6.2)

44. P 1.6.2 – the first two sentences should be moved to an introductory provision of the Hearing Procedures, and any necessary conforming changes should be made consistent with this directive. (P 131)

Deadline for Contesting a Remedial Action Directive (P 1.9)

45. P 1.9 – the two-day deadline for a Registered Entity to contest a Remedial Action Directive (i) should be two business days, and (ii) should be tied to the Registered Entity's actual receipt of the Remedial Action Directive. (P 138)

46. P 1.9.2 – the time periods for the prehearing conference and the evidentiary hearing should refer to business days. (P 138)

III. Regional Entity Delegation Agreements

47. All individual delegation agreements must be modified, including conforming changes, consistent with the *pro forma* revisions discussed above. (P 139; there is also a specific paragraph that states this for each Regional Entity agreement)

Texas Regional Entity (TRE) Delegation Agreement

Exhibit D

48. §10.0(5) should refer to the chief compliance officer's "summary written decision" not "summary written recommendation." (P 146 fn 80)

49. TRE Rules of Procedure ("ROP") must adopt P 1.1.5 of the NERC Hearing Procedures regarding the definition of "mitigation plan" in place of TRE's proposed deviation; TRE has not provided any justification for its proposed deviation. (P 148)

50. TRE ROP must use the NERC CMEP definition of "Cybersecurity Incident", or justify its proposed deviation. (P 149)

51. §1.2 of TRE ROP must be revised so that the hold harmless protection does not extend to breaches of confidentiality and is consistent with P 1.2.15 of the NERC Hearing Procedures; TRE has not justified its proposed deviation. (P 150)

52. §1.4.2 of TRE ROP – TRE's proposed deviation omitting the disclosure requirements of P 1.4.6 of the NERC Hearing Procedures is unsupported and therefore **rejected**; the provision in NERC P 1.4.6 should be adopted. (P 151)

Exhibit E

53. TRE Exhibit E should be revised to include the financial safeguards in *pro forma* Exhibit E, including the *pro forma* assurance that money ERCOT collects will be transferred to NERC on a timely basis. In addition, ERCOT, which is acting as

billing and collection agent, must adopt the financial safeguards as well as a statement that ERCOT will transfer money to NERC on a timely basis. (P 153)

Midwest Reliability Organization (MRO) Delegation Agreement

54. MRO Standards Process Manual – MRO must clarify the definition of "sub-regional variance" consistent with Order No. 672 (at P 291), to make it clear that exemptions that establish a level of reliability less than that set by continent-wide Reliability Standards are not allowed. (P 161)

55. MRO's proposal to assess Regional Entity members a $1,000 "initiation fee" must be identified and justified in MRO's annual BP&B (and therefore removed from the MRO delegation agreement if it is in it). (P 162)

56. MRO Exhibit E, §5, must be revised to include a list of MRO's non-statutory activities. (P 163)

57. MRO Exhibit E, §5, must be revised to identify the procedures MRO will follow to ensure funding applicable to its statutory activities is kept separate from funding for its non-statutory activities. (P 163)

Northeast Power Coordinating Council (NPCC) Delegation Agreement

Exhibit D

58. NPCC CMEP §3.3 must be revised to conform to the parallel provision of §3.3 of the NERC CMEP concerning spot-checking. NPCC's proposed deviation has not been justified. (P 171)

59. NPCC CMEP §3.0, which states that a compliance violation investigation will be conducted "upon completion of an initial event analysis," must be revised to provide that a compliance violation investigation will be commenced as soon as evidence of a possible violation of a Reliability Standard is discovered through any means. (P 172)

60. §3.0 of NPCC Ex. D – NPCC has not described with specificity the difference between an "initial determination" of violation and a "final compliance determination;" and the NPCC CMEP states the compliance staff will make a penalty determination in connection with this review process after issuing a Notice of Alleged Violation, which is inconsistent with NERC CMEP §5.1 (Notice of Alleged Violation is to include a proposed penalty or sanction). NPCC has not justified this deviation and must clarify the review procedures in §3.0 of NPCC Exhibit D. (P 173)

61. **By May 20, 2008**, NERC and NPCC must submit a schedule for ending the technical committee review process or a justification supporting its continuation. (P 174)

62. Exhibit D – NPCC must modify the voting protocols applicable to the NPCC Hearing Body (*i.e.*, the NPCC Compliance Committee) to be consistent with the directive in P 151 of the April 19 Order that each Regional Entity's hearing body render its decisions by a majority of the votes cast by a hearing body quorum (refers to §VII and §VI(E) of the NPCC Bylaws); or explain the manner and extent in which NPCC has complied with P 151 of the April 19 Order. (P 175)

63. Exhibit D – NPCC must explain how an NPCC compliance staff member may serve as chair of the NPCC compliance committee that rules on matters brought by the NPCC compliance staff, or amend NPCC Exhibit D accordingly (refers to 119 FERC ¶61,248 at P 41-42). (P 175)

Exhibit E

64. Exhibit E – NPCC has failed to include a list of its non-statutory activities or its procedures for ensuring that funding for non-statutory activities will be kept separate from funding for statutory activities; NPCC must demonstrate how the various funding mechanisms are kept separate. NPCC Exhibit E, §5, must be revised accordingly. (P 176)

    a. NPCC should address how its bank accounts and receivable/payable procedures are set up for both statutory and non-statutory functions. (P 176)

    b. NPCC should ensure that each employee involved in both statutory and non-statutory functions keeps accurate timesheets reflecting his/her activities. (P 176)

    c. NPCC's proposed revision to Exhibit D does not address FERC's directive that Ex. E specify NPCC's procedures for ensuring that non-statutory funding will be kept separate from funding for statutory activities. (P 176)

65. Exhibit E – the Fee Assessment Policy for Full Members should be removed. (P 177)

Reliability*First* (RFC) Delegation Agreement

Exhibit C

66. The RFC Standards Development Procedure Manual must be revised to remove the requirement of materiality as a condition applicable to adoption of a Reliability Standard (cites "Definition of a Reliability Standard" on page 3). (P 181)

Exhibit D

67. RFC Bylaws must be amended to incorporate the information in §2.0 of Ex. D on the composition of the Board compliance committee. (P 185)

68. §2.0 of Ex. D must be revised to address the voting procedures of the Board compliance committee as required by April 19 Order at P 151 (rulings of hearing body must be made by a majority of votes cast by a quorum of its members). (P 185)

69. P 1.1.5 of Hearing Procedures must be revised to include "limited liability company" in definition of "person" (consistent with NERC Hearing Procedures), or RFC must justify the deviation. (P 186)

70. P 1.2.12 of Hearing Procedures must be revised to correct omission of the reference to multiple respondents in a single proceeding (as found in the NERC Hearing Procedures); this omission is also inconsistent with P 1.4.10 of the RFC Hearing Procedures. (P 187)

71. P 1.5.5 of Hearing Procedures must enumerate RFC's "settlement procedures." (RFC's settlement procedures are also referenced at P 1.8.) (P 188)

72. P 1.4.2 and 1.4.6 of Hearing Procedures must be revised to eliminate the omission of the requirement for the hearing body to disclose the employment history of a hearing officer and to disclose similar information about a technical advisor (as found in the NERC Hearing Procedures). (P 189)

73. P 1.4.2(4) must be amended to specify that:

    a. the RFC hearing body's rights to submit additional evidence into the record are subject to the rights of any participant (i) to object to the introduction of this evidence and (ii) to present additional responsive evidence. (P 190)

    b. RFC hearing body must permit adequate time period for participants to make their objections or to present other related evidence (P 190)

    c. If RFC hearing body declines such objections or refuses to admit such evidence, it must explain why. (P 190)

74. P 1.5.7(b)(2) of Hearing Procedures which limits compliance staff's obligation to produce exculpatory evidence to "material" exculpatory evidence, must be revised to define materiality in this context. (P 191)

75. 1.5.10(a) of Hearing Procedures – the first sentence from P 1.5.10(a) of the NERC Hearing Procedures must be reinstated. (P 192)

76. 1.5.10(b) of Hearing Procedures, which specifies that investigative files or documents that would disclose RFC's investigative techniques will be considered entitled to protection in a protective order, must be revised to specify (i) that such files or documents will not ordinarily be discoverable, and (ii) that this provision will apply to the investigative techniques of any CEA, not just RFC compliance staff. (P 192)

77. RFC must adopt the provision of P 1.6.2 of the NERC Hearing Procedures concerning the burden of persuasion in a hearing held in response to a Remedial Action Directive (as required by P 146 of the April 19 Order). (P 193)

78. RFC must adopt the provision of P 1.6.14 of the NERC Hearing Procedures giving participants the right to cross-examine each witness of every other participant; or RFC must justify its deviation from this provision. (P 194)

SERC Delegation Agreement

79. §12.3 of SERC Bylaws musts be revised to reflect that allocation of non-statutory costs to members of Regional Entities will be based on participation in the non-statutory function and will be voluntary. SERC may not condition membership in the Regional Entity or participation in Reliability Standards development process on payment for non-statutory activities, regardless of whether the member benefits from the activities. (P 199)

80. In the future when SERC proposes to allocate costs for a non-statutory function, its BP&B should include a detailed listing and description of the funding sources for the non-statutory activities and a description of the procedures SERC will use to ensure funding of statutory functions remains separate from funding of non-statutory functions. [*No current compliance requirement*, but consider whether something should be added to the SERC agreement to memorialize this requirement.] (P 199)

81. SERC Bylaws must be revised to correct these deficiencies:

    a. Bylaws do not ensure that the hearing body meets the requirements concerning control by industry sectors. (P 200)

    b. Bylaws do not explain how a subset of the compliance committee would report to the SERC Board. (P 200)

c. Bylaws do not provide that the hearing body will decide questions by a majority of the votes cast by a quorum, as required by P 151 of April 19 Order. (P 200)

Southwest Power Pool (SPP) Delegation Agreement

Exhibit B

82. SPP Bylaws should be revised to explicitly state that membership in the Regional Entity is open to any entity and that SPP will not charge a fee for such participation. (P 213)

Exhibit E

83. §5 of Ex. E must be revised to either (i) include a list of SPP's specific procedures for ensuring that non-statutory funding will be kept separate from funding for statutory activities, or (ii) provide further explanation to demonstrate that SPP's current proposal will accomplish this. (P 216)

a. SPP should address how its bank accounts and receivables/payables procedures are set up for both the statutory and non-statutory functions. (P 216)

b. SPP should ensure that each employee involved in both statutory and non-statutory functions keeps accurate timesheets reflecting his/her activities. (P 216)

Western Electricity Coordinating Council (WECC) Delegation Agreement

Exhibit B

84. NERC and WECC should submit a status report **by September 21, 2008 and every six months thereafter** on efforts to comply with requirements concerning separation of WECC's compliance and reliability coordinator functions to ensure WECC does not monitor compliance with its own operations. (P 226)

85. §12.3 of WECC Bylaws must be revised to specify that allocation of non-statutory costs will be based on voluntary participation in these activities and that WECC may not condition membership in the Regional Entity on payment for non-statutory activities regardless of whether the member benefits from the activity. (P 227)

Exhibit C

86. WECC definition of "interested stakeholder" (in Standards Development procedure) is **rejected** due to requirement that participant have a "substantial business interest." Use of the term "interested stakeholder" is sufficient. (P 229)

Exhibit D

87. WECC and NERC must submit report by **June 30, 2009** concerning merits of retaining WECC's omission of NERC's shortened hearing procedures. (P 230)

88. WECC Hearing Procedures should include the interpretive principles in P 1.1.4(b) and (c) of NERC Hearing Procedures, or WECC should justify the omission. (P 231)

89. P 1.1.3 Standards for Discretion in WECC Hearing Procedures must be revised to cover all entities meeting the definition of "participant" in the NERC Hearing Procedures. (P 232)

90. The additional provisions in WECC Hearing Procedures (apparently in P 1.1.3) addressing the requirements or rights of "parties" do not state whether other persons FERC authorizes to participate in a proceeding will be subject to these provisions; this should be clarified. (P 232)

91. P 1.4.1(b)(2) of WECC Hearing Procedures must be revised to specify that compliance staff's obligation to produce exculpatory evidence is subject to and limited by any privileges that may apply. (P 233)

92. P 1.4.1(b)(3) of WECC Hearing Procedures – WECC must explain why compliance staff's obligation to produce material exculpatory evidence should extend to documents not otherwise discoverable or not otherwise needed for a complete record. (P 233)

93. P 1.4.1 of WECC Hearing Procedures – WECC must clarify meaning of term "material" exculpatory evidence in the context of this paragraph. (P 233)

94. P 1.6.2 of WECC Hearing procedures must be revised to provide that in the case of an appeal to NERC, WECC's clerk shall submit the full record to NERC. (P 234)

95. WECC compliance hearing body charter must be revised to show how the requirements will be met that hearing panels will be selected so that no two industry segments may control, and no single industry segment may veto, any decision by the hearing panel. (P 235)

96. P 1.8.6 of WECC Hearing Procedures must be revised to conform to P 1.4.5 of NERC Hearing Procedures to specify that (i) a hearing body decides a motion for

disqualification of a hearing officer and (ii) a member of a hearing body may not participate in deciding a motion for his/her disqualification. (P 236)

97. P 1.9.1 of WECC Hearing Procedures must be revised to ensure that a Registered Entity will receive a Remedial Action Directive on the date of its issuance by WECC compliance staff, or that the period for the Registered Entity to contest the Remedial Action Directive will begin on the date the Registered Entity actually receives it. (P 237)

98. P 1.9.1 of WECC Hearing Procedures must be revised to provide that a Registered Entity has two business days from actual receipt of a Remedial Action Directive to contest it. (P 237)

Exhibit E

99. Ex. E must add this language from §3(b) of the *pro forma* agreement: "upon approval of the annual funding requirements by applicable governmental authorities, NERC shall fund the [Regional Entity's] costs identified in this Exhibit E in four equal quarterly payment." (P 238)

Florida Reliability Coordinating Council (FRCC) Delegation Agreement

100. §5(b) of base delegation agreement must be deleted because it applies only to a Regional Entity organized on an Interconnection-wide basis, which FRCC is not. (P 250)

101. FRCC Bylaws and delegation agreement should be revised to state explicitly that FRCC membership is open to any entity, without cost. (P 251)

102. **By May 20, 2008** NERC and FRCC must submit a schedule for ending the stakeholder compliance committee review process, or a justification for its continuation. (P 252)

103. FRCC must show how its Board compliance committee will meet the requirement to render decisions by majority vote of a quorum when it acts as FRCC's hearing body, or make appropriate revisions to its Bylaws and/or Hearing Procedures to meet this requirement. (P 253)

104. §5 of Exhibit E must be revised or supplemented to be consistent with the requirements of the April 19 Order, to show how FRCC's various funding requirements are kept separate. (P 254-256)

    a. FRCC should address how its bank accounts and receivables/payables procedures are set up for both the statutory and non-statutory functions. (P 256)

b. FRCC should ensure that each employee involved in both statutory and non-statutory functions keeps accurate timesheets reflecting his/her activities. (P 256)

Update on Regulatory Matters

MRC Action Required

None

FERC Orders Issued Since the Update for the February 11–12, 2008 Meetings

1. February 5, 2008 — Order approving amendment to the NERC Statement of Compliance Registry Criteria. On November 13, 2007 NERC submitted a request to amend the Registry Criteria to include the definition of interchange authority, as approved in Order No. 693, as a function type to the Registry Criteria. *Docket No. RR08-3-000*

2. February 6, 2008 — Letter order approving the modification to the Violation Risk Factors (VRF) as indentified in Appendix B of the November 16, 2007 Order. NERC submitted a Compliance Filing in response to Paragraph 66 of the November 16, 2007 Order. The filing complied with the Commission's directives to revise 31 of the 74 VRF assignments. *Docket Nos. RR07-9-004 and RR07-10-004*

3. February 6, 2008 — Order accepting NERC's modifications to Sections 807 and 808 and a new Section 810 of the Rules of Procedures regarding the alerts issue. On October 19, 2007 NERC submitted a compliance filing in response to the FERC Order on Clarification issued on September 20, 2007. NERC was directed to make changes to Sections 807 and 808. *Docket No. RR06-1-011.*

4. February 21, 2008 — Order remanding proceeding to the ERO regarding NERC's decision to include Southeastern Power Administration on the NERC Compliance Registry. *Docket No. RC08-1-000.*

5. February 21, 2008 — Order denying rehearing regarding Lee County, FL and Solid Waste Authority of Palm Beach County, FL. *Docket Nos. RC07-3-001 and RC07-5-001*

6. February 21, 2008 — Order conditionally approving amended Rules of Procedure regarding section 1600 of the ROP that would establish a process for NERC or a Regional Entity to issue requests for data or information. *Docket Nos. RM06-16-000 and RR08-1-000*

7. March 20, 2008 — Notice of Proposed Rulemaking — Mandatory Reliability Standard for Nuclear Plant Interface Coordination. *Docket No. RM08-3-000*

8. March 20, 2008 — Order providing guidance on recovery of reliability penalty costs by Regional Transmission Organizations and Independent System Operators. *Docket No. AD07-12-000*

9. March 21, 2008 — Order addressing the revised Delegation Agreements submitted by NERC in an October 30, 2007 Compliance Filing and the November 2, 2007 WECC proposed revisions to the WECC bylaws. *Docket Nos. RR06-1-012, et al.*

10. March 21, 2008 — Order on compliance filing. NERC submitted a filing on December 14, 2007 in compliance with the order approving its 2008 business plan and budget filing. *Docket No. RR07-16-001*

11. April 4, 2008 — Order accepting compliance filing. NERC submitted a filing on March 4, 2008 in compliance with the December 20 order where NERC was ordered to file a plan to address the possible "reliability gap" involving the three Load-Serving Entities *Docket Nos. RC07-4-002, RC07-006-02 and RC07-7-002*

12. April 16, 2008 — Notice of Extension of Time. EEI and NEI requested an extension of time for filing comments on the Commission's NOPR issued March 20, 2008 regarding the Nuclear Plant Interface Coordination. The Commission granted the extension to May 13, 2008. *Docket No. RM08-3-000*

13. April 17, 2008 — Order approving amendment to WECC 2008 Business Plan and Budget. NERC filed a request on February 15, 2008 for approval of an amendment to the 2008 Business Plan and Budget of WECC to fund its reliability centers and for approval for WECC to include loan repayment and interest costs in its 2009 and 2010 assessments. *Docket No. RR07-16-002*

14. April 17, 2008 — Statement of Administrative Policy on Processing Reliability Notices of Penalty and Order Revising Statement in Order No. 672 [regarding FERC review of settlements]. *Docket Nos. AD08-6-000 and RM05-30-002*

15. April 17, 2008 — Notice of Proposed Rulemaking, "Modification of Interchange and Transmission Loading Relief Reliability Standards; and Electric Reliability Organization Interpretation of Specific Requirements of Four Reliability Standards," *Docket No. RM08-7-000,* (comments due 45 days after publication in Federal Register).

NERC Filings Since Update for February 11-12, 2008 Meetings

1. February 1, 2008 — Response to FERC Supplemental Request for Information on the status of the Underfrequency Load Shedding in response to Paragraph 145 of Order 693-A. *Docket No. RM06-16-000*

2. February 15, 2008 — Request of NERC for Approval of an Amendment to the 2008 Business Plan and Budget of WECC and for Approval for WECC to include loan repayment and interest costs in its 2009 and 2010 assessments. *Docket No. RR07-16*

3. March 3, 2008 **—** Compliance Filing in response to the June 7 Order, regarding the development of violation severity levels for each requirement and sub-requirement of each Reliability Standard. *Docket No. RR06-1-007 (*Docket changed to *Docket No. RR08-4)*

4. March 4, 2008 **—** Compliance filing setting forth the plan NERC proposes to address the "reliability gap," in response to December 20, 2007 Order regarding the three LSE appeals. *Docket No. RC07-4-000, et al.*

5. March 20, 2008 — Motion to Answer and Answer in response to Interventions/Protests/Comments posted in the Harquahala appeal. *Docket No. RC08-4-000*

6. April 1, 2008 — Compliance Filing of NERC in response to Paragraph 135 of Order No. 705 — Facilities Design, Connections and Maintenance Reliability Standards Submission of Revised Violation Risk Factors. *Docket N o. RM07-3-000*

7. April 1, 2008 — Compliance filing in response to Commission's October 18, 2007 Order approving the 2008 business plans and budgets for NERC and the eight Regional Entities. *Docket No. RR07-16-000*. The compliance filing included several items:
    a. A true-up for NERC and the Regional Entities of 2007 actual expenditures to the 2007 budgets.
    b. Revisions to NERC's records retention policy.
    c. Detail on the functional categories to be used the by Regional Entities for segregating non-statutory income, revenue and expenses and instructions detailing policies and procedures describing and providing guidance on the recording and summarizing of financial data and transactions, including an explanation of the interrelationship of the functional categories to its account listing.
    d. Identification of any instances where statutory funds were used for non-statutory purposes and a description of how those funds were or would be restored.

8. April 4, 2008 — TADS Phase II "package" under Section 1600 that the Commission required in a February 21 Order be filed for informational purposes at least 21 days before NERC posts the proposed package for public comment.

9. April 7, 2008 — Executed copies of the amended and restated Delegation Agreements with the Regional Entities pursuant to the Commission's March 21, 2008 Order. *Docket Nos. RR07-1, et al.*

10. April 15, 2008 — NERC filed a petition for approval of formal interpretation (b) of Requirement R17 of Reliability Standard BAL-005-0 — Automatic Generation Control and withdrawal of formal interpretation (a). *Docket No. RM08-7-000*

11. April 17, 2008 — NERC requests an additional extension of time from May 9, 2008 until August 29, 2008 to submit five revised Reliability Standards (MOD-001, -008, -028, -029 and -030) and until November 21, 2008 to submit one or more standards related to Capacity Benefit Margin as required by paragraph 223 of Order No. 890. *Docket Nos. RM05-17-000 and RM05-25-000*

Anticipated N**ERC Filings**

1. April 15, 2008 — The Commission issued a Notice soliciting public comment on information collection requirements under FERC-603 "Critical Energy Infrastructure Information" (CEII) filed on February 7, 2008. FERC requested a three-year extension, but with modifications to the existing collection of data. *Docket No. IC08-603-000*

2. April 21, 2008 — NERC must submit a revised registration determination to address (1) intergovernmental Memoranda of Understanding to determine if SEPA Army Corps or both should be registered for transmission operator (P 23), (2) whether NERC should

remand the decision to SERC to work with the Corps and SEPA (P 24), (3) the fact that the record does not clearly indicate the transmission facilities that SEPA is operating — which should be registered as the transmission owner (P 25), (5) whether SEPA is correctly registered as a resource planner (P 26), and (6) SEPA customers claim the responsibility to plan for specific loads and determine the adequacy of resources of those loads rests with SEPA's customers and not SEPA (P 27). *Docket No. RC08-1-000*

3. April 28, 2008 — Comments are due regarding the Commissions' March 20, 2008 NOPR on Mandatory Reliability Standard for Nuclear Plant Interface. *Docket No. RM08-3-000*

4. April 30, 2008 — Posting for Comment (See April 4) TADS Phase II "package" that is required under Section 1600. February 21 Order requires that the notification must be for informational purposes (P 19).

5. May 9, 2008 — ATC standards filing is due
    a. "Public utilities are granted an extension of time to and including May 9, 2008, to modify, working through NERC, the reliability standards related to the calculation of ATC. Notice is also given that public utilities are granted an extension of time to and including August 7, 2008, to develop, through the North American Energy Standards Board, business practices that complement NERC's new reliability standards." December 6 Notice of Extension of Time. *Docket Nos. RM05-25-000 and RM05-17-000*
    b. NERC has requested an extension of time.

6. May 13, 2008 — Comments are due regarding the March 20, 2008 NOPR on Mandatory Reliability Standard for Nuclear Plant Interface. *Docket No. RM08-3-000*

7. May 15, 2008 — Revisions to registration criteria regarding LSEs in response to the December 20, 2007 Order. *Docket Nos. RC07-4 et al.*

8. May 20, 2008 — NERC-NPCC filing regarding NPCC plans to terminate use of technical committee review process, or justification for continuing, as directed in FERC's March 21, 2008 Order. *Docket Nos. RR06-1-012, et al.*

9. May 20, 2008 — NERC-FRCC filing regarding FRCC plans to terminate stakeholder compliance committee review process, or justification for continuing, as directed in FERC's March 21, 2008 Order. *Docket Nos. RR06-1-012, et al.*

10. May 21, 2008 — Compliance filing regarding Section 1600 — Data Requests to address issues FERC identified in its February 21 Order conditionally approving Section 1600. *Docket Nos. RM06-16-000 and RR08-1-000*

11. June 29, 2008 — NERC must submit a revised registration determination to address (1) intergovernmental Memoranda of Understanding to determine if SEPA Army Corps or both should be registered for transmission operator (P 23), (2) whether NERC should remand the decision to SERC to work with the Corps and SEPA (P 24), (3) the fact that the record does not clearly indicate the transmission facilities that SEPA is operating – which should be registered as the transmission owner (P 25), (5) whether SEPA is correctly registered as a resource planner (P 26), and (6) SEPA customers claims that the

responsibility to plan for specific loads and to determine the adequacy of resources of those loads rests with SEPA's customers and not SEPA (P 27). *Docket No. RC08-1-000*

12. July 21, 2008 — Compliance filing regarding modifications to pro forma Delegation Agreement, the eight individual Delegation Agreements, and CMEP (including hearing procedures), as required by FERC's March 21, 2008 Order. *Docket Nos. RR06-1-012, et al.*

13. July 21, 2008 — NERC must submit a filing regarding revisions to WECC bylaws, as required by FERC's March 21, 2008 Order. *Docket Nos. RR06-1-012, et al.*

14. August 22, 2008 — NERC will file the 2009 business plans and budgets for NERC and the eight Regional Entities.

15. September 21, 2008 — NERC must submit a status report regarding NERC and WECC addressing WECC's monitoring and enforcement responsibilities regarding its reliability coordinators (status report due every six months thereafter), as required by FERC's March 21, 2008 Order. *Docket Nos. RR06-1-012, et al.*

Agenda Item 7
MRC Meeting
May 6, 2008

2009 NERC Business Plan and Budget

MRC Action Required
Discussion

Attachments
2009 NERC Business Plan and Budget — Version 1.1
2009 NERC Business Plan and Budget Preparation Schedule

Background
The NERC Finance and Audit Committee (FAC) conducted its initial review of the proposed 2009 NERC Business Plan and Budget, Version 1.0, via conference call on April 11. Version 1.1, which reflects changes made as a result of the FAC's discussion, as well as input from stakeholders, is attached for discussion by the Member Representatives Committee. Also attached for information is the 2009 NERC Business Plan and Budget Preparation Schedule.

Agenda Item 7
Attachment 1

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

2009 Business Plan and Budget

Version 1.1

to ensure the reliability of the bulk power system

April 2008

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Introduction

Total NERC Resources (in whole dollars)				
	2009 Budget	U.S.	Canada	Mexico
Total Funding	$38,933,665			
Total FTEs	119.5			
NEL				
NEL %				

The North American Electric Reliability Corporation (NERC) is a not-for-profit membership corporation organized under the New Jersey Nonprofit Corporation Act with a mission to ensure the reliability of the bulk power system in North America. Membership in NERC is open to any person or entity that has an interest in the reliable operation of the North American bulk power system.

NERC has been certified as the Electric Reliability Organization (ERO) within the United States. The ERO is defined in Section 215(a)(2) of the Federal Power Act (FPA) as the self-regulatory organization certified by the Federal Energy Regulatory Commission (FERC) under Section 215(c) to establish and enforce reliability standards for the bulk power system, subject to review by FERC. NERC presently has memorandums of understanding in place with Ontario, Nova Scotia, Québec, and the Canadian National Energy Board. In addition, NERC has been designated as the "electric reliability organization" under Alberta's Transportation Regulation. NERC standards are mandatory and enforceable in Ontario and New Brunswick as a matter of provincial law. NERC is working with the other governmental authorities in Canada to achieve equivalent recognition.

In the 2008 business plan, NERC extended the operation of the ERO into its first full year. The primary focus was to achieve excellence in operations at a record-setting pace while assuring the building blocks are in place to improve the reliability of the bulk power system in North America in both the short and long term. A new strategic plan was developed for the years 2008–2013[1] as the fundamental platform upon which annual business plans would be built. This business plan is the first one developed using the guidance and directions set in this new strategic plan.

NERC's principal activities in 2009 will continue to be the development, improvement, and adoption of reliability standards to ensure the reliable operation of the bulk power system of North America and the monitoring, evaluating, and enforcement (where authorized) of compliance with those reliability standards by owners, operators, and users of the bulk power system. In addition, NERC's principle activities will include conducting assessments of the reliability of the North American bulk power system. NERC will perform additional functions in support and furtherance of these principal responsibilities, such as training and certification of bulk power system operators, performing reliability readiness evaluations, and maintaining situation awareness of on-going events that threaten the reliability of the bulk power system. All of these activities serve the broad public purpose of helping to improve reliability.

[1] ftp://ftp.nerc.com/pub/sys/all_updl/docs/pubs/Strategic-PlanWebsite.pdf

Strategic Plan 2008–2013

During 2007, the NERC Board of Trustees developed a strategic plan to provide direction for the corporation's activities in 2008 and beyond. This plan has two key components: (1) reaffirmed corporate mission, vision, and value statements that have been embodied in prior strategic plans[2], and (2) strategic directional statements for the company. The five strategic direction statements cover the following topics:

- Business Model
- International Relationships
- Operations
- Assessments
- Tools and Technology

Each of the elements in this business plan supports at least one of these strategic topics.

Delegated Authority and the Regional Entities

As part of its responsibilities, NERC, as the international ERO, delegates its authority to Regional Entities (including cross-border regional entities) to perform certain functions through delegation agreements. This is consistent with the business model described in the strategic plan and the Energy Policy Act of 2005. On March 20, 2008, FERC, in the United States, approved revised delegation agreements between NERC and eight regional entities (Florida Reliability Coordinating Council, Midwest Reliability Organization, Northeast Power Coordinating Council, Inc. (CBRE), Reliability*First* Corporation, SERC Reliability Corporation, Southwest Power Pool, Inc., Texas Regional Entity, and the Western Electricity Coordinating Council). These delegation agreements describe the enforcement authority delegated to the Regional Entities. The funding for Regional Entities is approved separately with each Regional Entity submitting its own business plan and budget for consideration by NERC and the regulatory authorities. The Regional Entity business plans and budgets may be found on the following Web site: **[WILL INSERT INFORMATION WHEN IT BECOMES AVAILABLE]**

Detailed Business Plans and Budgets by Program

Details of the planning, operation, review, adjustment, and budget for each program area are included in Section A. The 2009 budget schedules are shown in Section B.

[2] *NERC Strategic Plan — 2003–2006*, approved by the Board of Trustees on June 10, 2003 and the updated version *NERC Strategic Plan — 2005–2008*, approved by the Board of Trustees on October 15, 2004.

Section A — 2009 Business Plan

Reliability Standards Program

Reliability Standards Program Resources (in whole dollars)	2008 Budget	2008 Projection	2009 Budget
Total FTEs	15.0	14.0	15.0
Total Direct Funding	$3,118,592	$2,778,809	$3,284,574
Total Indirect Funding[3]	$1,871,931	$1,836,193	$2,510,310
Total Funding	$4,990,523	$4,615,002	$5,794,884

Background

NERC will accept and evaluate proposals for, and will develop and approve, technically sound, fair, and balanced reliability standards designed to ensure the reliability of the bulk power system in North America. NERC will submit such standards to FERC for adoption as mandatory for bulk power system owners, operators, and users in the United States, and to the applicable governmental authorities in Canada for similar status. NERC has established, and will utilize, a reliability standards development process that has been accredited by the American National Standards Institute (ANSI) as meeting ANSI's essential requirements for standards development: fair, balanced, open, inclusive, and conducted with due process. Volunteer technical experts and stakeholders from the electric utility industry will develop the standards under the facilitation of NERC's professional staff, including NERC's standards development coordinators and process manager.

The activities necessary to implement the reliability standards development process will be conducted, to the extent possible, by conference calls, use of e-mail, Web site postings, and other means of electronic communications. In the event face-to-face meetings of participants are needed, those meetings will take place at NERC's headquarters in Princeton, New Jersey, or at other locations in various cities within the United States and Canada, as selected from time to time for the convenience of the meeting attendees.

Based on the allocation of professional and technical staff time to NERC programs and other resources that it expects to devote to the Reliability Standards Program, NERC estimates it will spend 14.9 percent of its resources on this activity.

Standards Process

NERC's Reliability Standards Development Process will be overseen by a Standards Committee whose purpose is to ensure that all stakeholder interests are fairly represented in the development of reliability standards, and that standards development teams have the technical resources and capabilities required to develop technically sound standards that will gain industry support. The open, inclusive, balanced, and transparent process ensures the resulting standards are just,

[3] Indirect funding is calculated by allocating all administrative services funding to the operational program areas on a proportional FTE basis.

reasonable, and nondiscriminatory. Participation by industry experts and compliance personnel ensures that the standards are technically sound, unambiguous, and measurable. The Standards Committee will be a broad-based, representative committee consisting of two representatives from each segment of the Registered Ballot Body (RBB). Participation in the RBB, which consists of multiple, defined segments, is open to any person or entity with an interest in the reliability of the North American bulk power system.

Reliability standards approved by the NERC Board of Trustees will be filed with FERC for its approval in accordance with Section 215(d) of the FPA and 16 C.F.R. § 39.5, and to the applicable governmental authorities in Canada. Processing the standards project related-postings in accordance with the Reliability Standards Development Procedure remains a critical path to timely completion of new or revised standards. The three-year standards work plan contemplates over 35 standards development projects from 2008 through 2010, a four-fold increase from 2006. In addition, NERC coordinates its reliability standards development activities with business practice standards developed by the North American Energy Standards Board (NAESB). To ensure that standards project postings are reviewed and processed in a timely manner and delivered with the quality expected, NERC expects to add one FTE to the program in 2009.

As noted earlier, FERC must find that a proposed reliability standard is just and reasonable, not unduly discriminatory or preferential, and in the public interest. Once FERC approves a standard and the effective date is reached, compliance with the standard is legally binding on all applicable owners, operators, and users of the bulk power system in the United States. NERC is working to gain recognition as the Electric Reliability Organization in the various jurisdictions in Canada and presently has memoranda of understanding in place with Ontario, Nova Scotia, Québec, and the Canadian National Energy Board. NERC has also been recognized as the ERO by the Alberta Ministry of Energy. NERC standards are mandatory and enforceable in Ontario and New Brunswick as a matter of provincial law.

Status of Mandatory Standards and the 2009 Work Plan

On March 16, 2007, FERC approved 83 reliability standards that become mandatory and enforceable as of June 18, 2007. In addition, FERC directed modifications to 56 of the approved standards and is holding an additional 24 standards pending receipt of additional information. In December 2007 and January 2008 respectively, FERC approved three additional Facilities Design, Connections and Maintenance, and eight Critical Infrastructure Protection reliability standards. As of March 7, 2008 FERC is considering one new standard (NUC-001-1 – Nuclear Plant Interface Coordination) and six revised reliability standards for approval. Additionally, FERC approved eight WECC regional standards as mandatory and enforceable on June 8, 2007. Reliability standards are mandatory and enforceable in the Canadian provinces of Ontario and New Brunswick upon action of the NERC Board of Trustees to approve standards.

The continued focus of the 2009 standards work plan is to complete the work necessary to ensure all of NERC's existing standards meet statutory and regulatory requirements as ERO standards. The focus is to make identified improvements to the highest priority standards and execute the remaining work plan projects in accordance with the *Standards Development Work Plan 2008–2010,* and obtain regulatory approval of the standards. NERC will review its standards work plan with FERC and the appropriate governmental authorities in Canada at least annually, or as requested, to coordinate work priorities and expectations. NERC filed its most recent work plan update with FERC and the applicable governmental authorities in Canada in October 2007.

Standards Program Goals

The goals of the standards program for 2009 are to:

- Meet all governmental authority directives with regard to standards development and procedures, including FERC Order Nos. 693, 705, and 706.
- Meet the milestones in the three-year standards work plan.
- Ensure the consistency and quality of regional reliability standards.
- Streamline and improve the standards process and associated tools.
- Work closely with NAESB in coordinating business practices and reliability standards.
- Communicate with stakeholders and regulators regarding standards development.
- Establish a long-term vision for standards improvement and initiate implementation of the strategy.
- Ensure the topics addressed by the reliability standards keep pace with changing industry needs.
- Strengthen the relationship with the industry's technical committees to ensure adequate input to standards development.

Standards Program Objectives

The standards program objectives for 2009 are grouped into six categories: standards development, regional reliability standards development, standards improvement, business practice interface standards, process improvement, and communications.

Standards Development

- Develop and revise standards as directed by applicable regulatory authorities with sufficient interaction with the regulatory authorities during the development process to achieve unconditional approval when filed.
- Meet the deliverables outlined in the current version of the *Standards Development Work Plan 2008–2010*. Complete the following projects in 2009:
  - Project 2007-03 — Real-Time Operations
  - Project 2007-04 — Certifying System Operators
  - Project 2007-05 — Balancing Authority Controls
  - Project 2007-11 — Disturbance Monitoring
  - Project 2007-12 — Frequency Response
  - Project 2007-17 — Protection System Maintenance and Testing
  - Project 2008-03 — Emergency Operations
- In accord with the *Standards Development Work Plan 2008–2010*, initiate the development process for the following new or modified standards:
  - Use of phasor measurement devices;
  - Review of the INT family of standards;
  - Improvements to FAC-001 and FAC-002 pertaining to connecting new facilities to the grid;

- Update to the disturbance and sabotage reporting requirements;
- Improve the presentation and content of standards pertaining to protection systems;
- Modeling load and demand data modifications;
- Protection system standard improvements; and
- Resource adequacy assessments.

- Propose new standards resulting from lessons learned by other NERC programs in the course of their activities (e.g., reliability assessment and performance analysis, compliance monitoring and enforcement, readiness evaluations, training, reliability benchmarking, and situation awareness and infrastructure protection).

Regional Reliability Standards Development

- Process regional standards submitted for approval and make recommendations to the NERC Board of Trustees.
- Provide guidance to regional entities in the development of regional standards during the developmental stages of the process.

Standards Improvement

- As appropriate, incorporate changes to the *Reliability Standards Development Plan 2008–2010* based on the needs and priorities identified by the industry and regulators in a technical review and assessment of reliability standards.
- Use the *Reliability Standards Development Procedure* to incorporate changes to planning and operating criteria and the definition of adequate level of reliability into reliability standards.
- Implement recommendations of the Standards Committee on the future organization of NERC's Reliability Standards.

Business Practice Interface

- Continue to coordinate NERC–NAESB standards efforts with respect to transmission loading relief, available transfer capability, balancing authority controls, interchange, and related tools.
- Continue to review and identify improvements to the joint NERC–NAESB development processes and procedures.
- Explore the roles of NERC and NAESB organizationally to identify possible overlaps and create synergies resulting in increased efficiency.
- Schedule joint meetings between the Standards Committee and the NAESB Wholesale Electric Quadrant Executive Committee to consider issues of common interest.

Standards Process Improvement

- Revise standards development processes and procedures, as necessary, in response to findings of July 2009 performance assessment.
- Revise standards development rules and procedures in response to governmental agency directives.

- Evaluate alternatives and improvements that ensure consensus is being achieved in an efficient manner.
- Establish criteria for determining what is a "high quality" standard.
- For high priority standards, shorten average development time of a standard to 12 months through stakeholder ballot (exclusive of field testing) while ensuring that the standard produced meets the criteria for "high quality" defined above.
- Evaluate the need to develop a triage function to assign resources to key issues.
- Increase engagement between the Standards Committee and the standards drafting teams regarding progress to work plan deliverables and issues of concern.
- Develop an improved model for responding to requests for formal interpretation.
- Evaluate cost of formal submission of approved standards to ANSI for adoption as a national ANSI standard.
- Submit all approved standards for regulatory approval within one month of Board of Trustees action.
- Develop and implement a reliability standard version control and notification process.
- Evaluate the need for process changes, and, if necessary, implement those appropriate changes to ensure drafting teams maintain focus on developing excellent technical standards.
- Assign, as required, regulatory or legal expertise to drafting teams to assist in developing standards requirements and measures that are legally defensible.
- Improve the process of obtaining Standards Committee input in response to regulatory directives or questions relative to reliability standards.
- Assign, as required, a professional technical writer to develop reliability standard language based on input from the drafting team.
- Establish targets for staffing and tools to support the standards process:
  - Identify areas for greatest opportunity for process improvement.
  - Rethink the process for achieving consensus on standards.
  - "Flatten" the standards process by conducting at least 50 percent of all drafting team and committee meetings by conference calls, Web casts, and e-mail actions.
  - Survey stakeholders and drafting team members for input into the process to identify opportunities for improvement.
  - Survey drafting team members after each project concludes for input into the process to identify opportunities for improvement.
  - Evaluate and improve ballot performance (quorums and balance).
  - Track adherence to the standards procedure.
  - Improve the training of drafting teams and revise drafting team guidelines as needed.

Communications

- Educate and inform industry stakeholders through standards workshops.
  - Consider innovative methods to increase industry participation, such as presentation of workshops through use of videotaping, Webinars, or WebEx's.

- Increase the outreach to industry stakeholders to specifically include trade organizations, through formalized standards conferences to obtain input to the reliability standards work plan and standards processes.
- Update and inform governmental regulators on the standards development work plan and processes through individual discussions and joint meetings and conferences.
- Develop standards program communications that support NERC's overall communications platform.
- Establish NERC's standards Web site as the "one-stop" for all supporting materials pertaining to the standards.

Reliability Standards Program

Funding sources and related expenses for the reliability standards section of the 2009 business plan are shown in the table below.

Statement of Activities
2008 Budget & Projection, and 2009 Budget
Reliability Standards

	2008 Budget	2008 Projection	2008 Projection Variance to 2008 Budget Over(Under)	2009 Budget	2009 Budget Variance to 2008 Projection Over(Under)
Funding					
ERO Assessments	$ 3,118,592	$ 3,118,592	$ -	$ 3,284,574	$ 165,982
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding	**$ 3,118,592**	**$ 3,118,592**	**$ -**	**$ 3,284,574**	**$ 165,982**
Expenses					
Personnel Expenses					
Salaries	$ 2,129,315	$ 1,741,045	$ (388,270)	$ 1,925,182	$ 184,137
Payroll Taxes	121,612	99,437	(22,175)	122,473	23,036
Benefits	257,778	210,773	(47,005)	203,611	(7,162)
Retirement Costs	144,687	118,304	(26,383)	267,906	149,602
Total Personnel Expenses	**$ 2,653,392**	**$ 2,169,559**	**$ (483,833)**	**$ 2,519,172**	**$ 349,613**
Meeting Expenses					
Meetings	$ 160,000	$ 232,050	$ 72,050	$ 343,653	$ 111,603
Travel	205,200	245,700	40,500	335,000	89,300
Conference Calls	-	-	-	-	-
Total Meeting Expenses	**$ 365,200**	**$ 477,750**	**$ 112,550**	**$ 678,653**	**$ 200,903**
Operating Expenses					
Consultants	$ 100,000	$ 100,000	$ -	$ 50,000	$ (50,000)
Contracts	-	-	-	-	-
Office Rent	-	-	-	-	-
Office Costs	-	31,500	31,500	36,750	5,250
Professional Services	-	-	-	-	-
Computer Purchase & Maintenance	-	-	-	-	-
Furniture & Equipment	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Contingency	-	-	-	-	-
Total Operating Expenses	**$ 100,000**	**$ 131,500**	**$ 31,500**	**$ 86,750**	**$ (44,750)**
Other Non-Operating Expenses	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Expenses	**$ 3,118,592**	**$ 2,778,809**	**$ (339,783)**	**$ 3,284,574**	**$ 505,765**
Change in Assets	**$ -**	**$ 339,783**	**$ 339,783**	**$ -**	**$ (339,783)**

Summary of Significant Variances — 2008 Projection to 2009 Budget

Funding Sources

- Funding for this program continues to be provided through assessments to LSEs or designees (mandatory in the United States)

Personnel Expenses

- The increase in personnel expense is for one additional FTE and for salary increases for current staff

Meeting Expenses

- $100,000 to add conferencing capability to meetings

Operating Expenses

- Contractor expense: To assist with development of NERC's standards Web site as the "one stop" for all supporting materials pertaining to standards
- Office Costs: Cell phone and wireless broadband internet connection cards charged to appropriate departments instead of General and Administrative function

Compliance Monitoring and Enforcement and Organization Registration and Certification Program

Compliance Monitoring and Enforcement and Organization Registration and Certification Program Resources (in whole dollars)			
	2008 Budget	2008 Projection	2009 Budget
Total FTEs	26.0	28.0	33.0
Total Direct Funding	$4,669,493	$4,950,968	$6,687,277
Total Indirect Funding	$3,244,681	$3,672,387	$5,522,682
Total Funding	$7,914,174	$8,623,354	$12,209,960

Background

As the ERO, NERC monitors and enforces compliance with approved reliability standards by owners, operators, and users of the bulk power systems throughout North America.

Monitoring, auditing, investigating, and enforcing compliance with reliability standards by owners, operators, and users of the bulk power system, as well as the development and adoption of the reliability standards themselves, are at the core of NERC's mission. Through a rigorous program of monitoring, audits, investigations, mitigation activities, and if necessary, the imposition of penalties and sanctions for noncompliance with reliability standards, NERC will strive to maintain a high level of reliable operation of the bulk power system. Reliable operation of the bulk power system is in the public interest, because it will benefit all owners, operators, and users of the bulk power system and, ultimately, all users and consumers of electric power in North America.

NERC's Compliance Monitoring and Enforcement Program (CMEP) activities will be conducted at its headquarters in Princeton, New Jersey, at Regional Entity offices, at the locations of owners, operators, and users of the bulk power system, and at such other field locations throughout North America as are necessary to the performance of these activities, including the organization of enforcement and appeal hearings at locations by the Regional Entities.

Monitoring for compliance with, and investigating alleged violations of, reliability standards will be conducted by NERC and Regional Entities' professional staff, with assistance from time to time by volunteers from the electric industry, government, and academia. Volunteers will be utilized primarily to provide industry expertise to compliance audit teams, technical advice, and recommendations to compliance staff. The program will be carried out in the United States as described in the NERC Rules of Procedure, NERC CMEP, and Regional Entity Delegation Agreements as approved by FERC. Separate agreements exist with the Canadian Provinces and may involve differing practices and rules.

The NERC CMEP is comprised of four key areas: organization registration and certification, compliance monitoring and reporting, enforcement and mitigation, and regional program oversight.

Based on the portion of its professional/technical staff time, and other resources that it expects to devote to the reliability standards compliance enforcement process, NERC estimates that it will spend 31.4 percent of its resources on this activity.

2009 Highlights

Organization Registration and Certification

Registration and, in some cases, certification of the organizations responsible for complying with the standards, will be an ongoing activity. The NERC Compliance Registry contains information on over 1,800 distinct organizations responsible for some portion of reliability of the bulk power system. Maintaining a complete and accurate database will be an on-going activity. NERC, in 2008, expects to begin to utilize this database as a means of communicating compliance requirements to the owners, operators, and users of the bulk power system. Information necessary to support such communications must be collected at the time of registration and maintained. Further, registration of entities utilizing the Joint Registration Organization provisions of the rules of procedure will increase. Joint registration requires that the registration of owners, operators, and users selecting this method of registration to be registered based on each of the over 1,200 applicable requirements in the standards, as opposed to registration by function type assigned to each of the 104 approved reliability standards. This type of registration requires a much more robust database to keep track of specific requirements each entity is subject to, as opposed to which standards they are subject to. These factors will require the addition of one FTE in this area to support the expansion of the database to allow input directly by the Regional Entities through enhanced Web interfaces.

Compliance Monitoring and Reporting

2009 will be the second full year for the enforceable CMEP in the United States. NERC continues to enhance the infrastructure to implement the CMEP including processes, procedures, software, and tools. NERC will implement a new Compliance Reporting, Analysis, and Tracking System (C-RATS) in 2008 using an outside software developer. This tool is expected to provide a much-improved reporting interface for the Regional Entities and enable more efficient reporting to appropriate governmental authorities including FERC. It will consolidate the registration, compliance violation, mitigation, and enforcement databases to allow efficient flow and analysis of information. This tool will directly interface with the regional databases and allow direct access to certain information by regulatory authorities replacing submissions by e-mail and otherwise thereby creating a need for direct user support with the Regional Entities and regulators. This area is currently understaffed to effectively manage and analyze the data while providing the support necessary to coordinate with vendors, Regional Entities, regulators, and other departments within NERC seeking compliance information, results, and trends. This effort will require two additional FTEs to fully support the development, operation, and maintenance of the new system while also providing the support necessary for data tracking, reporting, and analysis.

Enforcement and Mitigation

Mitigation of violations of NERC Reliability Standards remains central to the NERC CMEP. As the NERC program continues to unfold, review, and approve mitigation plans (as required by FERC), settlements and remedial actions, as well as analysis of the effectiveness of mitigation and enforcement strategies, are extremely important. A recent FERC order requires the prompt and thorough review of mitigation plans within 30 days of receipt by NERC. Further, NERC has begun to issue enforcement actions. The need to promptly review and approve mitigation plans and the associated analysis and tracking of enforcement results to ensure consistent application of enforcement actions and settlements requires NERC to add one FTE in this area.

Regional Program Oversight and Program Audit and Interfaces

NERC continues to carry out its responsibility for oversight of the Regional Entity compliance programs to ensure consistency and achieve maximum efficiency by providing direct assistance and oversight to the Regional Entities. NERC provides field personnel to assist the Regional Entities in conducting compliance audits (or other activities) and to ensure consistent application of the program. The NERC staff may be utilized to supplement Regional Entity staff should a region need additional resources to effectively implement its program. NERC regional program coordinators serve in this role.

Consistency also is achieved through training. NERC's Training, Education, and Operator Certification Program will continue to train compliance auditors, ensuring there are competent and trained personnel at NERC and in the Regional Entities. Resource requirements for this training are included in the Training, Education, and Operator Certification Program section. Other training will continue as necessary.

NERC will conduct a number of audits of the Regional Entity compliance programs, as required by its Rules of Procedure, within the three-year period following the inception of the enforceable programs. The scope of these audits will be established by NERC, but the audits themselves will most likely be carried out by professional contract auditors. NERC has not conducted audits of the NERC or Regional programs as FERC-approved enforceable programs due to changing requirements of the program as required by regulatory filings. The implementation of these audits in the last half of 2008 and continuing going forward will represent a significant increase in NERC's oversight and effectiveness monitoring effort. No additional positions were included in this area in 2008. Therefore, NERC will add one FTE to support the process of audits of the Regional Entities and tracking of implementation of modifications to the Regional Entity compliance programs as a result of audit findings in 2009. This effort will result in a significant increase in consulting costs on a going-forward basis because these costs have not been included in previous years' budgets.

Other Activities

NERC compliance program staff also supports the development of compliance administration elements contained in NERC Reliability Standards. The *Reliability Standards Development Plan 2007–2009* details plans to review and revise all of NERC's Reliability Standards. This undertaking requires a significant amount of work and coordination with the standards program and Regional Entities to review and update the compliance administration elements of all standards. NERC and Regional Entity staff will develop effective compliance violation severity levels, data retention requirements, and monitoring methods that work in concert with the requirements and measures within the standards.

NERC compliance program staff also provides information and results to the Reliability Assessment and Performance Analysis Program of NERC, and participates on each event analysis to make sure any potential violations of NERC standards are promptly identified and corrected.

Compliance Monitoring and Enforcement Program Objectives

- Direct and oversee the Regional Entities' implementation of their delegated compliance enforcement program responsibilities.
    - Maintain working relationships between NERC and the Regional Entities in order to achieve maximum effectiveness and consistency of monitoring, reporting, enforcement actions, and appeals by direct observation of program implementation.

  - Ensure timely mitigation of all violations of standards and requirements.
  - Provide oversight of Regional Entity compliance programs and conduct formal audits of at least three Regional Entity compliance programs.
  - Participate in settlement processes with the Regional Entities for violations of standards as required, and review all settlements for consistent application of settlement principles.
  - Review all enforcement actions for consistent application in all violations of standards.
  - Assess the effectiveness of enforcement actions in mitigating violations of standards.
- Maintain the training program for compliance auditors.
  - Work with the Training, Education, and Operator Certification and Reliability Readiness Evaluation and Improvement Programs to review and maintain auditor training requirements.
  - Ensure the training program requirements are delivered to all NERC and Regional Entity compliance auditors.
  - Maintain a training module for industry technical experts and audit volunteers.
  - Provide training on registration, reporting, and enforcement tools to the Regional Entity staff.
- Enhance processes, databases, and reporting tools to allow for seamless, uniform reporting of alleged and confirmed violations of standards, proposed penalty and sanction actions, and disposition of all violations.
- Maintain reporting relationships with appropriate governmental authorities in the United States, Canada, and Mexico and establish processes and procedures to report violations, levy penalties and sanctions, and remedy the violations.
  - Confidentially report all alleged violations of standards to FERC and the appropriate governmental authorities in the United States, Canada, and Mexico through established processes.
  - Make notice of penalty filings for all penalties and sanctions applied to compliance violations.
  - Provide other informational updates and filings as required by the NERC Rules of Procedure and governmental authorities.
- Maintain and enhance the reporting of violations of standards to the NERC Board of Trustees Compliance Committee.
  - Report quarterly all confirmed violations of approved NERC or regional standards for which investigatory, decisional, and appeal processes have been completed, including the identity of the organizations involved in those violations.
  - Track the mitigation of identified violations of standards.
- Develop, on a coordinated basis with the Reliability Standards Program, the compliance elements for approximately 100 new or revised standards.
- Manage all enforcement action appeals (resources based on approximately 25–30 appeals).

- Maintain a compliance reporting process.

Organization Registration and Certification Objectives

- Maintain an accurate registration list of all owners, operators, and users of the bulk power system for compliance monitoring and communication purposes.
  - Oversee the Regional Entities' implementation of the registration process.
  - Update and confirm the registration list as needed (at least annually).
  - Provide necessary registration information to FERC and other appropriate governmental authorities.
  - Review the completeness of the organization registration list and determine if additional efforts are necessary to identify other entities or collect more information from bulk power system owners, operators, and users.
  - Maintain a process for appealing a decision to include an entity on the registration list.
- Implement organization certification within the Regional Entities.
  - Maintain processes and procedures, used by NERC and the Regional Entities, for carrying out the delegated certification activities that are required by the certification standards.
  - Provide auditors for certification audits scheduled by the Regional Entities.

Compliance Enforcement and Organization Registration and Certification Program

Funding sources and related expenses for the compliance enforcement and organization registration and certification section of the 2009 business plan are shown in the table below.

Statement of Activities
2008 Budget & Projection, and 2009 Budget
Compliance and Organization Registration and Certification

	2008 Budget	2008 Projection	2008 Projection Variance to 2008 Budget Over(Under)	2009 Budget	2009 Budget Variance to 2008 Projection Over(Under)
Funding					
ERO Assessments	$ 4,669,493	$ 4,669,493	$ -	$ 6,687,277	$ 2,017,784
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding	**$ 4,669,493**	**$ 4,669,493**	**$ -**	**$ 6,687,277**	**$ 2,017,784**
Expenses					
Personnel Expenses					
Salaries	$ 3,090,959	$ 3,262,980	$ 172,021	$ 3,928,364	$ 665,384
Payroll Taxes	202,423	213,688	11,265	257,407	43,719
Benefits	403,403	425,854	22,451	449,998	24,144
Retirement Costs	233,809	246,821	13,012	297,153	50,332
Total Personnel Expenses	**$ 3,930,593**	**$ 4,149,343**	**$ 218,749**	**$ 4,932,921**	**$ 783,578**
Meeting Expenses					
Meetings	$ 30,000	$ 44,625	$ 14,625	$ 46,856	$ 2,231
Travel	378,900	400,000	21,100	800,500	400,500
Conference Calls	-	-	-	-	-
Total Meeting Expenses	**$ 408,900**	**$ 444,625**	**$ 35,725**	**$ 847,356**	**$ 402,731**
Operating Expenses					
Consultants	$ 330,000	$ 330,000	$ -	$ 850,000	$ 520,000
Contracts	-	-	-	-	-
Office Rent	-	-	-	-	-
Office Costs	-	27,000	27,000	32,000	5,000
Professional Services	-	-	-	-	-
Computer Purchase & Maintenance	-	-	-	25,000	25,000
Furniture & Equipment	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Contingency	-	-	-	-	-
Total Operating Expenses	**$ 330,000**	**$ 357,000**	**$ 27,000**	**$ 907,000**	**$ 550,000**
Other Non-Operating Expenses	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Expenses	**$ 4,669,493**	**$ 4,950,968**	**$ 281,474**	**$ 6,687,277**	**$ 1,736,310**
Change in Assets	**$ (0)**	**$ (281,475)**	**$ (281,474)**	**$ -**	**$ 281,475**

Summary of Significant Variances — 2008 Projection to 2009 Budget

Funding Sources

- Funding is provided through assessments to LSE or designees (mandatory in the United States)

Personnel Expenses

- The increase in personnel expense is driven by the requested increase of five (5) FTEs and by salary increases for current staff

Meeting Expenses

- Travel expense is expected to increase dramatically as all open positions are filled

Operating Expenses

- Consultants
  - Estimated cost of C-RATS — $500,000
  - Regional Entity Compliance Audits — $250,000
- Office Costs: Cell phones and wireless broadband internet connection cards charged to appropriate departments instead of General and Administrative function

Reliability Readiness Evaluation and Improvement Program

Reliability Readiness Evaluation and Improvement Program Resources (in whole dollars)			
	2008 Budget	2008 Projection	2009 Budget
Total FTEs	12.0	11.0	11.0
Total Direct Funding	$1,858,061	$1,884,110	$1,987,889
Total Indirect Funding	$1,497,545	$1,442,723	$1,840,894
Total Funding	$3,355,606	$3,326,833	$3,828,783

Background

NERC's Reliability Readiness Evaluation and Improvement Program will continue to conduct independent evaluations of balancing authorities, transmission operators, reliability coordinators, and other key entities that support the reliable operation of the bulk power system to assess their preparedness to meet their assigned reliability responsibilities.

The Reliability Readiness Evaluation and Improvement Program is an important component in helping NERC accomplish its mission. NERC evaluates entities that conduct activities and functions particularly critical to achieving the reliable operation of the bulk power system. Readiness evaluations are designed to ensure operators of the bulk power system have adequate tools, processes, procedures, and infrastructure in place to operate reliably. The evaluations identify strengths and areas for improvement in an effort to promote excellence in operations among these organizations. Ensuring reliable system operations benefits all owners, operators, and users of the bulk power system and, ultimately, all users and consumers of electric power in North America.

Readiness evaluations are conducted on a three-year cycle. Many reliability readiness evaluation activities take place at the control centers of the evaluated entities, while the associated administrative support and report preparation takes place at NERC's headquarters in Princeton, New Jersey. Reliability readiness evaluation teams are led by a NERC staff member or representative and consist of industry volunteers with appropriate technical expertise. A report of the evaluation team's findings is published on the NERC Web site[4].

Based on the portion of its professional/technical staff time, and other resources that it expects to devote to the Reliability Readiness Evaluation and Improvement Program, NERC estimates that it will spend 9.8 percent of its resources on this activity.

2009 Highlights

In 2009, the Reliability Readiness Evaluation and Improvement Program staff will continue to pursue the program's primary mission: to perform readiness evaluations of the registered entities across North America and assist them in implementing the evaluation team's recommendations. In addition to improving the evaluation process, program staff will work to expand the assistance aspect of the program to improve reliability by helping the industry help itself.

[4] http://www.nerc.com/~rap/

Program staff will provide meaningful guidance to industry committees and NERC's other program areas on topics that merit additional focus to support the goal of continuous improvement. To achieve this, program staff will continue to analyze readiness evaluation findings, while refining and expanding benchmarking activities. Program metrics will be expanded and the results will be shared with the industry. Using identified examples of excellence and reliability readiness evaluation experiences, program staff will work with industry committees and member forums to create useful excellent-practice guidelines for industry participants. Readiness program staff will have completed an inventory of the publicly posted positive observations by the end of 2008. In 2009, a database will be developed that will be able to be accessed through the new NERC Web site.

In 2009, readiness staff will develop and implement a plan to shift the emphasis of a portion of the evaluations to a new area, assistance. The objective will be to improve reliability by helping the industry help itself. Readiness staff will also work with training staff to develop courses and workshops on topics requested by the industry. This activity will be driven by the owners, operators, and users on the issues they identify. Readiness staff will interface directly with entities that request assistance on specific issues and will work with input from the NERC Operating Committee and Operating Reliability Subcommittee to create a process for this initiative.

NERC will also focus on evaluating and improving the effectiveness of the reliability readiness program and staff through a self-audit of its program. In collaboration with the Training, Education, and Operator Certification Program, two new advanced training courses for readiness team leaders will be developed. This training will add to the efficiency, consistency, and effectiveness of the reliability evaluations. To potentially reduce the time entities spend preparing for an evaluation, program staff will continue its efforts of streamlining the process.

Reliability Readiness Evaluation and Improvement Objectives

- Evaluate 65 reliability coordinators, balancing authorities, or transmission operators in 2009, independent of regional compliance audits.
    - Continue to expand the program to include evaluations of the large transmission owners (local control centers) that have been delegated functions or provide significant support to registered reliability entities. In 2009, approximately 12 evaluations of transmission owners will be conducted.
- Develop and implement a new industry assistance module within the existing evaluation process.
- Work with industry and member forum groups to continue to shift the Reliability Readiness Evaluation and Improvement Program into an INPO-type program that contains objective metrics.
- Work with the Operating Committee to develop and implement a comprehensive assistance program.
- Enhance communications to the industry on examples of excellence identified through the Reliability Readiness Evaluation and Improvement Program.
- Coordinate with the industry's technical groups to further develop and expand industry exceptional practices and work with the Training, Education, and Operator Certification Program to develop meaningful educational materials.

- Work with the Training, Education, and Operator Certification Program to develop an advanced training program for industry technical experts and volunteers who participate on reliability readiness evaluations.
- Maintain and enhance reporting of readiness evaluation recommendations.
  - Report quarterly the status and mitigation of each recommendation identified in the reliability readiness evaluation process.
  - Perform a critical analysis of evaluation recommendations and findings to determine meaningful trends, and communicate this information to the industry and the NERC board, as a mechanism for improvement.
  - Provide routine feedback to the standards program on deficient areas in existing reliability standards determined during the execution of the readiness evaluation process.
- Ensure reporting of all probable violations of standards and requirements to the regional compliance officers within two weeks of the conclusion of the readiness evaluations, unless the probable violation falls under the 48-hour reporting requirements.

Reliability Readiness Evaluations and Improvement Program

Funding sources and related expenses for the reliability readiness evaluations and improvement section of the 2009 business plan are shown in the table below.

Statement of Activities
2008 Budget & Projection, and 2009 Budget
Reliability Readiness Evaluation and Improvement

	2008 Budget	2008 Projection	2008 Projection Variance to 2008 Budget Over(Under)	2009 Budget	2009 Budget Variance to 2008 Projection Over(Under)
Funding					
ERO Assessments	$ 1,858,061	$ 1,858,061	$ -	$ 1,987,889	$ 129,828
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding	**$ 1,858,061**	**$ 1,858,061**	**$ -**	**$ 1,987,889**	**$ 129,828**
Expenses					
Personnel Expenses					
Salaries	$ 1,340,884	$ 1,240,150	$ (100,734)	$ 1,375,490	$ 135,340
Payroll Taxes	88,799	82,128	(6,671)	89,427	7,299
Benefits	173,945	160,877	(13,068)	141,879	(18,998)
Retirement Costs	96,933	89,651	(7,282)	163,009	73,358
Total Personnel Expenses	**$ 1,700,561**	**$ 1,572,806**	**$ (127,755)**	**$ 1,769,805**	**$ 196,999**
Meeting Expenses					
Meetings	$ -	$ 19,203	$ 19,203	$ 20,164	$ 960
Travel	157,500	157,500	-	187,000	29,500
Conference Calls	-	-	-	-	-
Total Meeting Expenses	**$ 157,500**	**$ 176,703**	**$ 19,203**	**$ 207,164**	**$ 30,460**
Operating Expenses					
Consultants	$ -	$ 125,000	$ 125,000	$ -	$ (125,000)
Contracts	-	-	-	-	-
Office Rent	-	-	-	-	-
Office Costs	-	9,600	9,600	10,920	1,320
Professional Services	-	-	-	-	-
Computer Purchase & Maintenance	-	-	-	-	-
Furniture & Equipment	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Contingency	-	-	-	-	-
Total Operating Expenses	**$ -**	**$ 134,600**	**$ 134,600**	**$ 10,920**	**$ (123,680)**
Other Non-Operating Expenses	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Expenses	**$ 1,858,061**	**$ 1,884,110**	**$ 26,049**	**$ 1,987,889**	**$ 103,779**
Change in Assets	**$ -**	**$ (26,049)**	**$ (26,049)**	**$ -**	**$ 26,049**

Summary of Significant Variances — 2008 Projection to 2009 Budget

Funding Sources

- Funding for this program is only provided through assessments to LSEs or designees (mandatory in the United States)

Personnel Expenses

- No additional FTEs are requested for 2009. The 2009 budget assumes all open positions in 2008 are filled.

Meeting Expenses

- Estimated 65 evaluations to be completed in 2009 versus 50 in 2007 and 2008

Operating Expenses

- Consultants: Used in 2008 until open positions are filled
- Office costs: Cell phone and wireless broadband internet connections cards charged to appropriate departments instead of General and Administrative function

Training, Education, and Operator Certification Program

Training, Education, and Operator Certification Program Resources (in whole dollars)			
	2008 Budget	2008 Projection	2009 Budget
Total FTEs	6.0	6.0	6.0
Total Direct Funding	$1,400,295	$1,437,568	$1,829,409
Total Indirect Funding	$748,773	$786,940	$1,004,124
Total Funding	$2,149,068	$2,224,508	$2,833,533

Background

System Operator Certification Program

The System Operator Certification Program provides a certification credential for the operating personnel of the owners, operators, and users of the bulk power system. The program initially certifies the competency of operating personnel through examinations. The credential is maintained through the use of approved continuing education. Operation of the program is overseen by the Personnel Certification Governance Committee (PCGC), which is a standing committee of NERC reporting to the Board of Trustees. The PCGC provides oversight to the policies and processes used to implement and maintain the integrity and independence of the System Operator Certification Program. The PCGC reports to the Board of Trustees, but has autonomy in developing and implementing system operator certification eligibility requirements (the development, administration, and scoring of the system operator assessment instruments, and operational processes for the System Operator Certification Program).

Fees charged for the examinations and renewals of credentials are structured to fully recover the costs of operating the System Operator Certification Program. NERC's professional/technical staff administers the System Operator Certification Program on behalf of the PCGC on a fee-for-service basis designed to compensate NERC for its costs incurred in administering the program. In addition, NERC uses the services of a professional examination proctoring service to administer certification examinations at various locations around the United States and Canada.

The System Operator Certification Program is an important component of NERC's mission. Providing a system of certification of the knowledge of operating personnel of owners, operators, and users of the bulk power system of North America helps achieve a base level of competence among these operating personnel in the performance of their reliability-related functions. This further ensures the reliable operation of the bulk power system of North America. Ensuring the reliable operation of the bulk power system benefits all owners, operators, and users of the bulk power system and, ultimately, all users and consumers of electric power in North America. Reliable operation provides a broad-based benefit to the public and is in the public interest.

Continuing Education Program

NERC maintains a Continuing Education Program to foster the improvement of, and promote quality in, the training programs used and implemented by owners, operators, and users of the

bulk power system. The program approves those activities and entities meeting NERC's continuing education requirements.

Specifically, the NERC Continuing Education Program: promotes excellence in training programs, and advances improved performance for bulk power system operating personnel identified in the preceding paragraph; develops and maintains a process to approve continuing education providers and activities by requiring the providers to meet continuing education requirements approved by NERC; periodically audits continuing education providers and training activities to ensure the approved providers and training activities satisfy NERC's continuing education requirements; and develops and maintains an appeals process for disputed application reviews, interpretations of guidelines and standards, probation or suspension of approved provider status, or continuing education hour disputes.

The costs of administering the Continuing Education Program are fully covered through fees paid by the continuing education providers. Records for this program are integrated with the portal and database used by the System Operator Certification Program. Costs for this tool are equally divided between the two programs.

Education Program

NERC develops and maintains an education program, learning materials, and activities to establish training requirements for NERC and Regional Entity staff. The primary audience of the training component is NERC and Regional Entity staff, whereas the education component focuses on providing educational activities and tools to industry stakeholders, participants, and regulators.

The training and education program activities are carried out by NERC's professional/technical staff and contractors with the assistance of volunteers from the electric industry, government, and academia possessing the appropriate technical knowledge and competencies. The training and education program activities are carried out at its headquarters in Princeton, New Jersey, through conferences calls, exchanges of information through e-mail, Web site postings, other means of electronic communications, and in meetings and conferences at locations around the United States and Canada as selected from time to time for the convenience of meeting attendees.

Developing and maintaining education activities for bulk power system operating personnel and the other targeted audiences is an important component of NERC's accomplishment of its mission. Providing an education program for the personnel of owners, operators, and users of the bulk power system of North America, relating to their compliance with reliability standards and other reliability-related job functions, will help to achieve a high level of knowledge and competence among these personnel in the performance of their reliability-related functions. It also helps to promote a culture of compliance within the industry, and thereby will help to further ensure the reliable operation of the bulk power system of North America.

Based on the allocation of professional and technical staff time to NERC programs and other resources that it expects to devote to the Training and Education Program, NERC estimates it will spend 7.3 percent of its resources on these three activities.

2009 Highlights

System Operator Certification
In 2009, the System Operator Certification Program will finalize the three-year transition from reliance on testing for credential maintenance to using continuing education hours.

To accommodate the recordkeeping requirements for using continuing education, the program implemented a new portal and database in 2007 with additional upgrades in 2008. The database allows system operators to register for exams and track the status of maintaining their credential with approved continuing education hours. The fully allocated costs of this project were recovered through fees collected by the System Operator Certification Program and the Continuing Education Program. Continued improvements to the database are expected in 2009 to expand accounting and reporting features for the administrators. The cost of these improvements, estimated to be $30,000, will be recovered through the fees received by the System Operator Certification Program and the Continuing Education Program.

It is necessary to perform a job analysis at least once every five years to ensure the examination is based on current job tasks. The last analysis was performed in 2005. A survey tool was developed in 2008 and will be administered in 2009 to identify the reliability-based tasks performed by system operators on the bulk power system. The surveys will be analyzed by a professional psychometric service to establish the new content outline for each credential. New examinations will be developed in 2010 based on the new content outline.

Since its inception, the certification program was designed and has operated to meet standards established by accreditation agencies, but has not pursued accreditation. In 2009 the PCGC will pursue accreditation of the System Operator Certification Program through either the International Standards Organization (ISO) or ANSI, the same organization that accredits the NERC Reliability Standards Program. Accreditation will demonstrate the integrity, independence, and fairness of the program to parties in the United States, Canada, and Mexico. The PCGC will use an expert contractor to help prepare NERC for the accreditation effort. The cost of the accreditation and the consultant is estimated to be $30,000.

In 2008, the PCGC began researching the feasibility of establishing a voluntary advanced certification credential based on interest shown by system operators and other stakeholders. The goal is to further advance reliability by formally recognizing those system operators with high-level skills and knowledge coupled with experience. The program will begin work in 2009 to establish the criteria and foundation for an advanced certification based on the results of the PCGC work in 2008. An outside consultant will be used to ensure the new certification credential is established properly, meeting accreditation criteria at a cost of $15,000.

The PCGC will also investigate the interest, feasibility, and scope of establishing a voluntary certification program for relay technicians. The operation of protection systems has implications in the reliable operation of the bulk power system and has been a factor in numerous large-scale outages. No additional costs are anticipated for this work in 2009 since most of the work will be performed by the PCGC members.

Continuing Education Program
This program will continue to grow in 2009 as all system operators must use continuing education hours to maintain their credential instead of retesting. The program will continue to audit approved activities to verify the quality of these activities.

The database used by the System Operator Certification Program is also used by the continuing education program to enter approved learning activities and track system operator transcripts. Routine upgrades estimated to be $30,000 will be made to the database to improve administration and operation. This share of the cost of maintaining the database is shared with the certification program and is fully recovered through user fees.

Criteria for education providers to qualify for "NERC-approved provider" status will also be raised to reflect an assurance of quality that did not exist with the old designation. Most of this activity will be performed by industry volunteers from the Personnel Subcommittee.

Education Program

To recognize the training providers with high quality programs, NERC will continue the effort begun in 2008 of investigating how to implement a voluntary process to accredit industry training programs that meet the high quality criteria. This effort is separate from the continuing education effort as it targets the quality of the entity's system operator training program, not just the activities that are offered. If this program is implemented, it will be developed in 2010 for implementation in 2011. The Personnel Subcommittee will perform work on this initiative with NERC staff.

Training was developed and delivered for compliance audit team leaders and volunteers in 2008 as part of the overall plan to develop skilled auditors. The plan is to develop a full curriculum of activities over a four-year period allowing auditors the time to attend. Much of the audit team leader training is classroom-based since the targeted skills tend to be "soft skills" and are best learned through hands-on exercises. Volunteer education is more knowledge-based and delivered electronically. Three additional learning activities based on priorities identified through compliance auditor performance needs will be developed or acquired and delivered in 2009. Standards drafting team leaders and participants received their first formal training in 2008. Two additional standards drafting team leader skill sets will be targeted for activity development in 2009. Two learning activities for advancing reliability readiness evaluator skills will also be developed in 2009.

Staff will be engaged in delivering the existing load of classroom activities that increases each year, developing two of the proposed activities, and managing contractors to complete the remaining activities. Developing (or acquiring) and delivering five of these activities will require the partial or whole use of outside contractors at a cost of $250,000 for contracting and procurement.

In 2008, NERC began offering monthly Webinars on current topics and issues of interest to the industry. The goal is to educate stakeholders on NERC program areas and various issues affecting reliability. The Webinars, presented as a part of the NERC communications activities, have been very successful with positive feedback. NERC will continue to offer these Webinars in 2009 with expanded capabilities of reaching a larger audience.

The education program and the human resources department will expand the NERC staff training initiative begun in 2008. Three additional technical skills and general industry knowledge courses will be developed and offered to improve employee knowledge and capabilities. These activities will be developed internally and obtained through outside sources. The delivery of these activities will be via classroom and e-learning. The share of activities not developed by NERC staff will require $80,000 for contractor fees and course procurement.

Finally, NERC began delivering on-demand internet-based learning activities in 2007 and greatly expanded this in 2008 using an interim system with limitations. A needs analysis will be performed in 2008 identifying the features of a system to manage learning activities and knowledge with the necessary bandwidth and features for NERC and others to host many future activities for the industry. NERC will continue contracting for the interim system at a cost of $15,000 per year until the new system is developed and capable of delivering activities.

Training, Education, and Operator Certification Program Objectives

Operator Certification

- Administer the current System Operator Certification Program.
- Administer the job analysis tool to define the tasks performed by system operators for future examinations.
- Complete the three-year transition to the exclusive use of continuing education hours for maintaining system operator certification.
- Continue to identify and implement additional interface improvements to the portal and database that personnel use to register for the system operator certification examinations and track continuing education activities.
- Continue the development of an advanced certification for system operators.
- Investigate the feasibility, interest, and scope of developing a certification credential for protective relay technicians.
- Pursue accreditation of the program through ISO or ANSI.

Continuing Education

- Implement the newly raised requirements to become an approved training provider.
- Raise the quality and levels of training for system operators throughout North America to ensure that delivered training meets the needs of the System Personnel Certification Program.
- Continue to define and implement improvements to the portal and database used by providers to track delivered continuing education activities.

Training and Education

The tasks are arranged by the department or program they are intended to support.

Compliance

- Continue delivering the fundamental compliance auditor training for new NERC staff, Regional Entity staff, and contractors who act as team leaders, on a quarterly basis.
- Develop and deliver three new learning activities to further improve compliance auditor skills.
    - Partner with auditing organizations such as IIA to offer appropriate auditing courses for NERC compliance audit team members.

  - Develop and deliver audit training for IT specialists on the Critical Infrastructure Protection standards.
- Develop and deliver a compliance workshop for NERC and Regional Entity compliance staff.

Readiness

- Perform job task analysis for readiness evaluation team leaders and members.
- Develop and deliver two new advanced training courses for readiness team leaders to improve their skills.
- Continue to deliver on-demand fundamental training for industry technical experts and volunteers who participate on readiness evaluations (internet-based).
- Develop and deliver advanced training for industry technical experts and volunteers who participate on reliability readiness evaluations (internet-based).
- Develop and implement an assistance program to enable industry entities to improve reliability by "helping the industry help itself."

Standards

- Continue delivering existing courses for the drafting team leaders and participants.
- Develop and deliver two new courses to improve the skills of drafting team leaders and participants.

System Events Analysis

- Develop and deliver learning activities and materials on lessons learned from the analysis of system events and system performance.

Human Resources

- Assist in the development and delivery of three new training modules for NERC staff with the human resources department.

Communications

- Develop and deliver monthly learning activities on topics and issues of reliability via WebEx and post to the new learning management system for future viewing.

Training, Education, and Operator Certification Program

Funding sources and related expenses for the training, education, and operator certification section of the 2009 business plan are shown in the table below.

Statement of Activities
2008 Budget & Projection, and 2009 Budget
Training and Education

	2008 Budget	2008 Projection	2008 Projection Variance to 2008 Budget Over(Under)	2009 Budget	2009 Budget Variance to 2008 Projection Over(Under)
Funding					
ERO Assessments	$ 437,295	$ 437,295	$ -	$ 848,409	$ 411,114
Membership Dues	-	-	-	-	-
Testing Fees	963,000	963,000	-	981,000	18,000
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding	**$ 1,400,295**	**$ 1,400,295**	**$ -**	**$ 1,829,409**	**$ 429,114**
Expenses					
Personnel Expenses					
Salaries	$ 714,461	$ 713,832	$ (629)	$ 740,375	$ 26,543
Payroll Taxes	43,554	43,529	(25)	46,210	2,680
Benefits	78,916	78,760	(156)	64,058	(14,702)
Retirement Costs	89,564	89,546	(17)	107,161	17,615
Total Personnel Expenses	**$ 926,495**	**$ 925,668**	**$ (827)**	**$ 957,804**	**$ 32,136**
Meeting Expenses					
Meetings	$ 54,000	$ 69,000	$ 15,000	$ 80,000	$ 11,000
Travel	55,800	66,400	10,600	87,225	20,825
Conference Calls	-	-	-	75,000	75,000
Total Meeting Expenses	**$ 109,800**	**$ 135,400**	**$ 25,600**	**$ 242,225**	**$ 106,825**
Operating Expenses					
Consultants	$ 100,000	$ 100,000	$ -	$ 45,000	$ (55,000)
Contracts	264,000	264,000	-	571,400	307,400
Office Rent	-	-	-	-	-
Office Costs	-	12,500	12,500	12,980	480
Professional Services	-	-	-	-	-
Computer Purchase & Maintenance	-	-	-	-	-
Furniture & Equipment	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Contingency	-	-	-	-	-
Total Operating Expenses	**$ 364,000**	**$ 376,500**	**$ 12,500**	**$ 629,380**	**$ 252,880**
Other Non-Operating Expenses	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Expenses	**$ 1,400,295**	**$ 1,437,568**	**$ 37,273**	**$ 1,829,409**	**$ 391,841**
Change in Assets	**$ 0**	**$ (37,273)**	**$ (37,273)**	**$ -**	**$ 37,273**

Summary of Significant Variances — 2008 Projection to 2009 Budget

Funding Sources

- Partial funding is provided through assessments to LSEs or designees (mandatory in the United States). Testing fees and certificate renewal fees collected for system operator certification fully support the System Operator Certification Program and fees collected from training providers fully support the Continuing Education Program.

Personnel Expenses

- No new personnel are proposed for 2009

Meeting Expenses

- The NERC WebEx contract and associated expenses are being transferred to the Training, Education, and Personnel Certification program from General and Administrative

Operating Expenses

- Three learning activities to be developed by consultants or procured for NERC staff are proposed at a cost of $80,000.
- Seven learning activities to be developed by consultants or procured for the compliance, standards, and readiness programs are proposed at a cost of $250,000.

Reliability Assessment and Performance Analysis Program

Reliability Assessment and Performance Analysis Program Resources (in whole dollars)			
	2008 Budget	2008 Projection	2009 Budget
Total FTEs	11.0	12.0	14.0
Total Direct Funding	$2,881,436	$3,402,561	$4,286,378
Total Indirect Funding	$1,372,750	$1,573,880	$2,342,956
Total Funding	$4,254,186	$4,976,441	$6,629,334

Background

In the United States, the ERO is required to "conduct periodic assessments of the reliability and adequacy of the bulk-power system in North America." (FPA, § 215(g); 16 C.F.R. § 39.11.) In accordance with this responsibility and NERC's responsibility to support the reliability of the North American bulk power system, NERC intends to prepare three reliability assessments each year: a long-term reliability assessment report; a summer assessment report; and a winter assessment report. These reports will analyze electricity demand and the adequacy of supply throughout the North American bulk power system, as well as examine the adequacy of the transmission system. NERC will also prepare special reliability assessment reports as conditions warrant or as directed by the Board of Trustees. Copies of all reliability assessment reports will be submitted to FERC, the U.S. Department of Energy (DOE), the applicable governmental authorities in Canada, regional advisory boards, and be made publicly available. Further, NERC will analyze significant system events that occur on the bulk power systems, identify the causes of such events, assess past reliability performance, disseminate its findings to the electric industry, and develop reliability performance benchmarks.

Reliability and adequacy assessments and analyses of significant system events occurring on the bulk power system will be conducted by teams comprising members of NERC's and Regional Entity professional/technical staff along with volunteers from the electric industry, government, and academia possessing appropriate technical competencies. Except to the extent that site visits are necessary in conducting analyses and investigations, the work of these teams will be carried out through conference calls, exchanges of information through e-mail, Web site postings, other means of electronic communications, and, to the extent necessary, in meetings at NERC's headquarters in Princeton, New Jersey or at meeting locations around the United States and Canada selected for proximity to and ease of access by the team members.

The purposes of NERC's reliability assessment and performance analysis activities (in addition to fulfilling its obligations under the FPA and the FERC Rules) are to: conduct, and report the results of, independent assessments of the overall reliability and adequacy of the interconnected North American bulk power system, both as existing and as planned; analyze off-normal events on the bulk power system; identify the root causes of events that may be precursors of potentially more serious events impacting the reliable operation of the bulk power system; assess past reliability performance for lessons learned; disseminate findings and lessons learned to the electric industry to improve reliability performance on the bulk power system; and develop, and monitor performance against, reliability performance benchmarks. These objectives, and the

performance of reliability and adequacy assessments, are important components of NERC's accomplishment of its mission. By performing reliability and adequacy assessments of the bulk power system as well as analyzing and determining the root causes of significant system events occurring on the bulk power system, NERC seeks to disseminate to owners, operators, and users of the bulk power system, as well as to FERC and other applicable governmental authorities, information that can help prevent future significant system events and improve reliable operation of the bulk power systems of North America. Improvements in the reliable operation of the bulk power system will benefit all owners, operators, and users of the bulk power system, all users of electricity in North America, and will provide a broad-based benefit to the public and will be in the public interest.

Based on the portion of its professional/technical staff time, and other resources that it expects to devote to the performance of reliability and adequacy assessments, the analysis of significant system events on the bulk power system, and to the development of reliability metrics and benchmarks, NERC estimates that it will spend 17.0 percent of its resources on this activity.

Reliability Assessment Program Objectives

- Conduct and report the results of independent assessments of the overall reliability and adequacy of the interconnected North American bulk power system for 2009 summer, 2009/2010 winter, and 2009–2018 long-term reliability.
- Assess and report on the key issues, risks, and uncertainties that affect or have the potential to affect the reliability of the existing and future bulk power system (supply shortages, generating unit shutdowns, fuel supply and transportation disruptions, droughts, floods, strikes, extreme weather, etc.).
- Address potentially negative impacts on bulk power system reliability or adequacy due to the operation and planning of gas supply, transportation, and storage, on the operation and planning of electric systems. Review the impact of potential fuel supply or transportation infrastructure interruptions in reliability assessments. Maintain a continuing working dialog on bulk power system reliability and adequacy issues with natural gas supply and transportation industry representatives.
- Investigate, assess, and report on the potential impacts of demand response initiatives, and introduction of renewable energy sources on the adequacy and operating reliability of the bulk power systems.
- Establish and maintain relationships with industry, regulatory, and governmental organizations involved with or having an interest in bulk power system reliability (e.g., DOE, FERC, Energy Information Administration (EIA), RTOs/ISOs, Electric Power Research Institute (EPRI), National Energy Board (NEB), Canadian provincial governmental agencies, etc.).
- Review international practices on emerging issues and incorporate them into the reliability assessment reports.
- Review regional reliability assessment processes, criteria, and methods for consistency, Understand their interdependency and impact on neighboring regions.
- Develop white papers on key emerging issues with associated metrics and industry action plans.

- Develop and submit standards authorization requests (SARs), as required, for any deficiencies or needs revealed by reliability assessments, and solicit industry subject matter experts to serve on standards drafting teams.

At its March 12–13, 2008 meeting, the Planning Committee approved a plan to improve the seasonal and long-term reliability assessments. This plan, focused on creating a platform from which the industry can address reliability considerations, increases the level of granularity, transparency, and comprehensiveness of assessments. Additional human resources at NERC are required to support the plan's implementation and execution. The plan's enhancements include:

- Risk assessment for Emerging Issues and determination of Scenarios
- Risk Assessment and probability analysis for the Long-Term Reliability Assessment
- Additional and improved metrics for long-term assessment
- Development and maintenance of a NERC-wide reliability assessment handbook
- Addition of on-peak and off-peak transmission and capacity reliability assessment
- Generation/fuel interdependency

To achieve the objectives of the assessment improvement plan, NERC requires the addition of one FTE to the reliability assessment program.

Federal, state, and provincial CO_2 legislation is pending throughout North America. A special reliability assessment is vital to quickly evaluate a variety of CO_2 legislative scenarios and their impact on bulk power system reliability. For NERC to perform this vital independent assessment in a timely manner assistance from consultants at an estimated cost of $250,000 is required.

Event Analysis and Information Exchange Program Objectives

One of the NERC recommendations following the August 2003 blackout was to establish a reliability performance monitoring function to evaluate and report bulk power system reliability performance. The Event Analysis and Information Exchange Program has made significant progress in implementing this blackout recommendation, but additional resources are needed for its full implementation.

Nineteen analyses of significant system events have been completed since the end of 2005 and 42 more events are under review, completion of nine has been delayed, and three more are awaiting the availability of staff resources. Other related activities supported by the events analysis staff include: establishing an information release policy and a secure industry Web site for the Alerts needed due to critical infrastructure concerns; developing "Triage Team" plans and an industry support committee structure for event analysis; revising the events tracking database; providing technical support to the North American Synchro-Phasor Initiative; and fostering improved system powerflow and dynamics modeling through technical symposiums.

- Conduct NERC-level analyses, prioritized based on available resources, of significant system events to determine root causes and lessons learned.
- Participate in regional analyses as determined by NERC.
- Record all significant system events in the NERC Events Database, created in 2006 (in conjunction with the Situation Awareness and Infrastructure Security Program).

- Maintain and enhance *NERC's Blackout and Disturbance Response Procedures* (in conjunction with the Situation Awareness and Infrastructure Security Program).
- Direct teams in the analysis of significant system events.
- Analyze the frequency performance of the interconnections using data from appropriate measurement systems.
- Establish a clear set of criteria for sorting reported system events into categories, deciding what level of analysis is needed, and who will undertake such analyses (triage function).
- Communicate to the industry root causes of events that may be precursors of potentially more serious events and other "lessons learned" from all analyses. For these purposes, develop Advisories, Recommendations, and Essential Actions. In the cases of Recommendations and Essential Actions, collect, summarize, and develop reports to FERC and governmental authorities in Canada on industry responses.
- Analyze and identify improvements to the interaction of the transmission system with nuclear power plants, especially related to minimum voltages required by the plants for the safe shutdown of reactors.
- Develop and submit SARs, as required, for any deficiencies or needs revealed by event analyses.
- Advise the Reliability Readiness Evaluation and Improvement Program of specific issues identified through analyses that should be included in future readiness evaluations.
- Advise the Compliance Monitoring and Enforcement Program of any potential reliability standards violations identified through significant system event analyses.
- Assess and report quarterly to NERC technical committees and the Board of Trustees on past reliability performance of the bulk power system.
- Assess and report annually to NERC technical committees and the Board of Trustees on reliability performance for the previous five years, including recommendations to improve reliability.
- Improve understanding of dynamic system behavior by: promoting understanding of inter-area oscillations and their importance to system integrity; and promoting application of Phasor Measurement Unit-based technology to improve system operator visualization and operational preparedness.
- Improve performance of system protection by promoting generator/transmission protection and controls coordination and improvement.
- Improve system modeling by sponsoring model validation/dynamics symposiums; assist interconnection-wide reliability assessment groups in improving the quality of base cases they develop; promote development of standard file formats for exchanging real-time powerflow data (power system "snapshots"); and standardize the mapping of power system elements (generators, transmission lines, etc.) in databases and power system models.
- Communicate regularly with the Transmission Owners and Operators Forum on findings from event analyses.

These objectives will require the addition of one senior engineer FTE to the Event Analysis and Information Exchange Program. In addition, $122,175 is required for system analysis software for the new engineer.

Reliability Metrics and Benchmarking Program Objectives

- Maintain a performance metrics "dashboard" on the NERC Web site.
- Identify and track key reliability indicators (such as system control performance, transmission loading relief (TLR), disturbances, etc.) as a means of benchmarking reliability performance and measuring reliability improvements (initiated in 2006).
- Identify and continuously monitor performance indices to detect emerging trends.
- Review reliability metrics with industry, regulatory, and governmental organizations involved with or having an interest in bulk power system reliability.
- Develop leading indicators to recognize and eliminate unreliable actions and at-risk conditions.
- Establish and maintain a continuing working dialog on reliability benchmarking with industry representatives.

Transmission Availability Data System (TADS) Objectives

The NERC Planning Committee (PC) formed a task force in October 2006 to develop a proposal for quantifying and measuring transmission system performance and reliability. This proposal was to identify the type of transmission availability data that transmission owners should report to NERC; a single process for collecting such data that avoids duplication of effort; the transmission availability statistics that could be calculated from the reported availability data; and guidelines for release of such data and statistics. The PC approved the final report of the task force at its June 2007 meeting, and the NERC Board of Trustees approved the Phase I data collection in October 2007. NERC contracted in 2008 for the development of custom software for TADS and is conducting training for data reporters: under the guidance of a contracted project manager.

Based on these efforts and progress to date, NERC is working with the Energy Information Administration to eliminate its requirement for transmission owners to report transmission availability data as part of Form EIA-411, Schedule 7.

Specific objectives for the TADS Program in 2009 include:

- Maintain and expand the Transmission Availability Data System (TADS) and report on trends in transmission equipment performance.
- Subject to board approval in 2008, expand the system to include historic Planned Outages and related metrics required by the TADS Task Force.
- Eliminate the need for duplicate Transmission Owner reporting via EIA-411.
- Export data from TADS to fulfill the EIA-411 Schedule 7 requirements.
- Expand the TADS to cross reference TADS and GADS automatic outage events. (Events which automatically outage both transmission circuits and generators should be integrated and such trends tracked via TADS.)

To meet the above objectives of the Transmission Availability Data System (TADS) will require contract software development at a cost of $150,000.

Generating Availability Data System (GADS) Objectives

NERC maintains a Generating Availability Data System (GADS) on the performance of electric generating equipment; provides assistance to those researching information on power plant availability; supports equipment reliability and availability analyses and other decision-making processes; facilitates the use of GADS data in conducting assessments of generation resource adequacy; and reports on trends in generating equipment performance.

GADS is used extensively throughout the industry to support resource adequacy studies and improve the availability performance of generating equipment. The 2009 budget for this program includes the following:

- Continued upgrades and improvements to pc-GAR plus maintenance and upgrades to other GADS-related programs, such as edit and entry programs.
- Complete work on translation tables to convert INPO data to the GADS format for collecting all nuclear data to reduce the reporting burden on data reporters (i.e., report once to both databases). Develop web interface data collection, editing and return reports program. (This software would allow reporters to batch GADS event and performance data to the software which will edit, mark errors and return reports to the user without human interface. It will store all event and performance records as "good data" or "data with errors". It will be a quick turn around and remove the need for some technical analyst support.)
- Place pc-GAR on the web. Set up account numbers where entities can use the software on a subscription basis as needed and access the same executable problems as NERC now sends them on CDs. This will lead to increased use of pc-GAR and more income from use of the software.
- Pursue additional special contracts with analysts for the application of GADS data. (One such agreement is in place, which yields income to NERC when the contractor makes use of GADS data in fulfilling contract services with clients.)
- Continue to provide GADS consulting and training services on a fee basis.
- Reevaluate pricing of GADS products and services to close the gap between expenses and revenues. Specific efforts to achieve this objective include:
  - Sales of pc-GAR to non utilities.
  - Sales of Manufacturers Support Services to equipment manufacturers.
  - Charging for workshops.
  - Receiving travel compensation for special assistance visits.

To meet the above objectives, the Generating Availability Data System (GADS) requires contract software development at a cost of $135,000.

Reliability Assessment and Performance Analysis Program

Funding sources and related expenses for the reliability assessment and performance analysis section of the 2009 business plan are shown in the table below.

Statement of Activities
2008 Budget & Projection, and 2009 Budget
Reliability Assessment and Performance Analysis

	2008 Budget	2008 Projection	2008 Projection Variance to 2008 Budget Over(Under)	2009 Budget	2009 Budget Variance to 2008 Projection Over(Under)
Funding					
ERO Assessments	$ 2,731,436	$ 2,731,436	$ -	$ 4,136,378	$ 1,404,942
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	150,000	150,000	-	150,000	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding	**$ 2,881,436**	**$ 2,881,436**	**$ -**	**$ 4,286,378**	**$ 1,404,942**
Expenses					
Personnel Expenses					
Salaries	$ 1,597,025	$ 1,731,434	$ 134,409	$ 2,061,821	$ 330,387
Payroll Taxes	87,313	94,661	7,348	123,259	28,598
Benefits	212,587	230,479	17,892	243,551	13,072
Retirement Costs	203,611	220,747	17,136	266,649	45,902
Total Personnel Expenses	**$ 2,100,536**	**$ 2,277,321**	**$ 176,785**	**$ 2,695,280**	**$ 417,959**
Meeting Expenses					
Meetings	$ 92,500	$ 157,825	$ 65,325	$ 165,750	$ 7,925
Travel	203,400	314,238	110,838	362,733	48,495
Conference Calls	-	-	-	-	-
Total Meeting Expenses	**$ 295,900**	**$ 472,063**	**$ 176,163**	**$ 528,482**	**$ 56,420**
Operating Expenses					
Consultants	$ 75,000	$ 200,000	$ 125,000	$ 451,270	$ 251,270
Contracts	410,000	410,000	-	435,000	25,000
Office Rent	-	-	-	-	-
Office Costs	-	43,177	43,177	54,171	10,994
Professional Services	-	-	-	-	-
Computer Purchase & Maintenance	-	-	-	122,175	122,175
Furniture & Equipment	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Contingency	-	-	-	-	-
Total Operating Expenses	**$ 485,000**	**$ 653,177**	**$ 168,177**	**$ 1,062,616**	**$ 409,439**
Other Non-Operating Expenses	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Expenses	**$ 2,881,436**	**$ 3,402,561**	**$ 521,125**	**$ 4,286,378**	**$ 883,817**
Change in Assets	**$ -**	**$ (521,125)**	**$ (521,125)**	**$ -**	**$ 521,125**

Summary of Significant Variances — 2008 Projection to 2009 Budget

Funding Sources

- Partial funding for this program in 2009 is provided through assessments to LSEs or designees (mandatory in the United States). Additional funding is obtained through the sale of the Generating Availability Data System (GADS).

Personnel Expenses

- Additional FTEs requested for assessments and event analysis

Meeting Expenses

- Meeting and travel cost increases reflect the impact of added staff and anticipated inflation

Operating Expenses

- Consultants: Increase is for the planned evaluation of CO2 legislation and its impact on the reliability of the bulk power system
- Contracts: Additional $140,000 to support the Reliability Assessment Improvement Initiative

Situation Awareness and Infrastructure Security Program

Situation Analysis and Infrastructure Security Program Resources (in whole dollars)			
	2008 Budget	2008 Projection	2009 Budget
Total FTEs	5.0	6.0	10.0
Total Direct Funding	$3,244,461	$3,578,862	$5,963,632
Total Indirect Funding	$623,977	$786,940	$1,673,540
Total Funding	$3,868,438	$4,365,802	$7,637,172

Background

NERC's Situation Awareness and Infrastructure Security (SAIS) program encompasses a set of coordinated, complementary activities intended to: monitor conditions on the bulk power system and rapidly communicate substantive changes in those conditions to relevant parties; understand threats and vulnerabilities to the reliability of the bulk power system and plan and direct activities to defend against them; and develop and maintain processes, procedures, and tools that address industry's situation awareness and infrastructure security needs. Achieving these goals helps NERC fulfill its overall mission for the benefit of owners, operators and users of the bulk power system, and, ultimately, provides a broad-based benefit to the public. SAIS activities are carried out primarily by NERC's professional and technical staff at its headquarters in Princeton, New Jersey or at other locations in various cities within the United States and Canada, as selected from time to time for the convenience of the meeting attendees.

Based on the portion of its professional/technical staff time and other resources that it expects to devote to the situation awareness program, NERC estimates that it will spend 19.6 percent of its resources on this activity.

Activities in the SAIS program are grouped into three functional areas: ES-ISAC operations, critical infrastructure protection, and reliability tools and support services.

Electricity Sector Information Sharing and Analysis Center (ES-ISAC) Operations

NERC formed the ES-ISAC in 1999 to gather and disseminate information pertinent to the growing terrorist threat against critical infrastructure. Since then, the ES-ISAC has expanded its scope to include information about all types of threats to reliability and electricity infrastructure, including natural disasters, power system operational issues, and physical and cyber security.

The ES-ISAC performs the following functions:

- Receives reports of physical- and cyber-security related incidents from electricity sector participants and assists government agencies in analyzing them to uncover trends.
- Disseminates threat and vulnerability assessments to electric sector participants.
- Maintains situation awareness and communicates significant bulk power system events to United States and Canadian government agencies, electric sector participants, and other critical infrastructures as necessary.

- Liaises with other ISACs.
- Analyzes sector interdependencies.
- Participates in infrastructure exercises.

Critical Infrastructure Protection

Critical infrastructure protection consists of a collection of strategic and tactical initiatives aimed at improving the overall resiliency of the bulk power system in North America to threats and vulnerabilities. These include physical and cyber security, particularly involving SCADA and process control systems; cross-sector dependencies and their implications to planning and operations; and, emergency response and business continuity planning, including training and exercises. NERC, coordinates, collaborates, and facilitates many of these initiatives.

Reliability Tools and Support Services

To help achieve its reliability mission, NERC provides tools and other support services for the use and benefit of bulk power system operators including reliability coordinators. These tools provide situation awareness and rapid communications, help implement transmission loading relief procedures, and meet requirements for same-time information to market participants and others. NERC also assesses new and emerging technologies and, as appropriate, encourages and facilitates their development into tools that enhance the reliability of the bulk power system.

Creation and management of tools is consistent with guidelines established by NERC's Board of Trustees. A description of each tool NERC currently supports is provided in the *NERC Reliability Tools and Support Service Catalog.*

Situation Awareness and Infrastructure Security 2009 Objectives

ES-ISAC

- Enhance the capability to monitor conditions on the bulk power system and rapidly communicate conditions to appropriate stakeholders.
  - Continue the deployment of the Situation Awareness Tool to all reliability coordinators with completion targeted for 2010.
  - Deploy an emergency notification system.
  - Upgrade threat and incident reporting mechanisms.
- Build effective coordination and communications channels with NERC's Events Analysis and Communications program areas.
- Fully implement the ES-ISAC governance model approved by the Board in 2008.

Situation Awareness Monitoring Center

- As directed by FERC, design, build and staff a SA monitoring center within NERC's present office space to house expanded ES ISAC operations. Target operation date June 2009.
  - Work with FERC and DOE to identify monitoring functions and create an effective room design to support those functions within a pre-determined 1,000 sq foot area within NERC's Princeton NJ location.

  - Equip the center with wall-mounted, flat screen displays for existing SA tools (Resource Adequacy, RCIS, F-net, NERC SAT, etc.).
  - Plan for multiple work stations to support a fully staffed 24x7 operation.
  - Incorporate a fully equipped conference room within the SA Monitoring Center foot print to enable on-demand meetings between ES ISAC and other NERC staff, FERC, DOE, and other relevant parties during normal and emergency operations as well as during periods of increased risk to the bulk power system. Capabilities to include state-of-the art teleconferencing and other telecommunications tools.
  - Install a back-up power generator on NERC's premises to ensure high availability of the SA Monitoring Center.
  - Hire least two dedicated ES ISAC technical staff and one dedicated manager in 2009 to begin the transition from a virtual operation to a full-time 24x7 monitoring operation. Staff is expected to grow to eight in 2010 to complete the transition.
- Revise the ES-ISAC Concept of Operations to reflect the launch of the SA Monitoring Center and its new functions.
- Document an emergency communications plan.

Critical Infrastructure Protection

- Work with NERC's Critical Infrastructure Protection Committee (CIPC) to create plans for electric sector preparedness and emergency response exercises to be executed in 2010 and 2011.
- Work with the ISAC Council and CIPC to define a strategy for addressing cross-sector interdependency issues.
  - Participate in exercises designed to identify cross-sector dependencies.
  - Work with the ISAC Council and CIPC to prepare guidance on how to account for these dependencies in planning and operations.
- Actively manage the Infrastructure Security Guideline Program.
  - Review and improve existing security guidelines.
  - Develop new security guidelines to meet the needs of the electricity sector.
  - Consider whether any guidelines should be developed into NERC standards.
- Support other NERC business units' activities related to CIP standards.
- Identify priority activities for NERC in DOE's Roadmap to Secure Control Systems in the Energy Sector and, with DOE, create action plans for CIPC or other relevant NERC groups' consideration.
  - Monitor the progress of the DOE-sponsored Detection and Analysis of Threats in the Energy Sector (DATES) project and identify opportunities for active participation.
- Identify priority activities for NERC in the Department of Homeland Security's National Infrastructure Protection Plan and, with DHS, create action plans for CIPC or other relevant NERC groups' consideration.
  - Participate in the DHS-sponsored activities to create and implement performance metrics related to its National Infrastructure Protection Plan.

- Strengthen relationships with government entities and continue ongoing efforts to build long-lasting partnership and collaboration.

Reliability Tools and Support Services

- Manage the North American SynchroPhasor Initiate (NASPI) project.
  - Continue to fund the contracted professional project manager.
  - Prepare annual business plans for NASPI with critical milestones and funding requirements.
  - Develop regulatory support and approval for NASPI at provincial, state, and federal levels.
  - Resolve industry concerns about data availability, disclosure, and confidentiality.
  - Develop and implement recommendations for NERC's on-going role in NASPI over the mid- and long-term.
  - Ensure the successful installation of phasor measurement units at all key locations in the North American interconnections to provide optimal coverage and wide-area visibility.
  - Contract with TVA to expand use of its existing super data concentrator to collect data from new phasor measurement units.
  - Identify up to seven locations in North America to house additional super data concentrators to improve data collection performance, reliability, and availability. Acquire necessary hardware and software to deploy at least three new sites in 2009, with the remainder to come on-line in 2010.
  - Design and begin to construct the telecommunications network required to exchange data between super data concentrators and to deliver information created from that data to control centers.
- With appropriate technical committees, evaluate the need for and document requirements of new tools or improved functionality for existing tools (e.g., Interchange Distribution Calculator), and initiate upgrades using approved management processes.
- Meet performance and availability expectations for reliability tools and improve the support function to meet user expectations.

In order to achieve the goals for 2009, SAIS will need to add three FTEs.

Situation Awareness and Infrastructure Security Program

Funding sources and related expenses for the situation awareness and infrastructure security section of the 2009 business plan are shown in the table below.

Statement of Activities
2008 Budget & Projection, and 2009 Budget
Situational Awareness and Infrastructure Security

	2008 Budget	2008 Projection	2008 Projection Variance to 2008 Budget Over(Under)	2009 Budget	2009 Budget Variance to 2008 Projection Over(Under)
Funding					
ERO Assessments	$ 3,139,461	$ 3,139,461	$ -	$ 5,928,632	$ 2,789,171
Membership Dues	$ -	$ -	$ -	$ -	$ -
Testing Fees	$ -	$ -	$ -	$ -	$ -
Services & Software	$ 105,000	$ 110,000	$ 5,000	$ 35,000	$ (75,000)
Workshops	$ -	$ -	$ -	$ -	$ -
Interest	$ -	$ -	$ -	$ -	$ -
Miscellaneous	$ -	$ -	$ -	$ -	$ -
Total Funding	**$ 3,244,461**	**$ 3,249,461**	**$ 5,000**	**$ 5,963,632**	**$ 2,714,171**
Expenses					
Personnel Expenses					
Salaries	$ 693,952	$ 756,251	$ 62,299	$ 1,208,023	$ 451,773
Payroll Taxes	$ 40,030	$ 43,624	$ 3,594	$ 74,014	$ 30,390
Benefits	$ 45,865	$ 49,983	$ 4,117	$ 103,672	$ 53,689
Retirement Costs	$ 79,654	$ 86,805	$ 7,151	$ 135,395	$ 48,590
Total Personnel Expenses	**$ 859,501**	**$ 936,662**	**$ 77,161**	**$ 1,521,103**	**$ 584,442**
Meeting Expenses					
Meetings	$ 102,000	$ 102,000	$ -	$ 85,800	$ (16,200)
Travel	$ 80,100	$ 135,000	$ 54,900	$ 177,254	$ 42,254
Conference Calls	$ -	$ -	$ -	$ -	$ -
Total Meeting Expenses	**$ 182,100**	**$ 237,000**	**$ 54,900**	**$ 263,054**	**$ 26,054**
Operating Expenses					
Consultants	$ 250,000	$ 250,000	$ -	$ 1,300,000	$ 1,050,000
Contracts	$ 1,952,860	$ 2,149,860	$ 197,000	$ 2,373,600	$ 223,740
Office Rent	$ -	$ -	$ -	$ -	$ -
Office Costs	$ -	$ 5,340	$ 5,340	$ 30,874	$ 25,534
Professional Services	$ -	$ -	$ -	$ -	$ -
Computer Purchase & Maintenance	$ -	$ -	$ -	$ -	$ -
Furniture & Equipment	$ -	$ -	$ -	$ 475,000	$ 475,000
Miscellaneous	$ -	$ -	$ -	$ -	$ -
Contingency	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses	**$ 2,202,860**	**$ 2,405,200**	**$ 202,340**	**$ 4,179,474**	**$ 1,774,274**
Other Non-Operating Expenses	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Expenses	**$ 3,244,461**	**$ 3,578,862**	**$ 334,401**	**$ 5,963,632**	**$ 2,384,770**
Change in Assets	**$ -**	**$ (329,401)**	**$ (329,401)**	**$ -**	**$ 329,401**

Summary of Significant Variances — 2008 Projection to 2009 Budget

Funding Sources

- Primary funding for this program is provided by assessments to LSEs or designees (mandatory in the United States). Additional funding is obtained through fees charged for ES&D software and royalties on the FIST software. TSIN user fees are now collected by NAESB.

Personnel Expenses

- Three (3) FTEs to be added in 2009 and one (1) existing FTE moving from another program

Meeting Expenses

- The increase is for anticipated inflation

Operating Expenses

- Consultants: $1.3 million for NASPI Coordinator
- Contracts: Increases mainly for nerc.net telecommunications and the IDC contract
- Furniture and Equipment: $475,000 estimated cost for furniture and equipment to build a dedicated situation awareness facility

Administrative Services

Technical Committees and Members' Forums

Technical Committees and Members' Forums (in whole dollars)	2008 Budget	2008 Projection	2009 Budget
Total FTEs	2.0	2.0	2.0
Total Direct Funding	$888,288	$895,819	$898,750

Background

The success of the NERC programs will depend on the active and direct participation of industry stakeholders, including its members. The stakeholders are the source of expertise in the industry, and provide the force that raises the bar for enhancing reliability through technical excellence.

NERC has established and facilitates a Members' Forum that serves the interests of stakeholders within a specific NERC sector, and general, technical committees that integrate the "deliverables" of NERC programs. NERC and its committees and forums follow four guiding principles: provide expertise; have a clear purpose; promote efficiency; and participate for the community good.

Members' Forum Objectives

- Reevaluate the structure, role, and deliverables of the technical integration committee(s) to ensure the industry is able to effectively and efficiently provide its expertise in support of NERC's mission as the ERO.
- Utilize the NERC technical integration committee(s) and its subject matter expert subgroups: for technical advice and support for all NERC programs with specific advice and support to the Reliability Assessment and Performance Analysis Program (Planning Committee) and the Reliability Readiness Evaluation and Improvement Program (Operating Committee); to serve as forums for technical discussion and integration of the output of each NERC program; and to provide expert technical opinions on all reliability matters to the NERC programs and the Board of Trustees.

Technical Committees and Member Forums

Funding sources and related expenses for the Members' Forums section of the 2009 business plan are shown in the table below.

Statement of Activities
2008 Budget & Projection, and 2009 Budget
Technical Committees and Member Forums

	2008 Budget	2008 Projection	2008 Projection Variance to 2008 Budget Over(Under)	2009 Budget	2009 Budget Variance to 2008 Projection Over(Under)
Funding					
ERO Assessments	$ 713,288	$ 713,288	$ -	$ 148,750	$ (564,538)
Membership Dues	175,000	750,000	575,000	750,000	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding	**$ 888,288**	**$ 1,463,288**	**$ 575,000**	**$ 898,750**	**$ (564,538)**
Expenses					
Personnel Expenses					
Salaries	$ 435,171	$ 435,171	$ -	$ 450,402	$ 15,231
Payroll Taxes	19,582	19,582	-	20,268	685
Benefits	46,731	46,731	-	48,367	1,637
Retirement Costs	39,403	39,403	-	40,782	1,379
Total Personnel Expenses	**$ 540,887**	**$ 540,887**	**$ -**	**$ 559,819**	**$ 18,932**
Meeting Expenses					
Meetings	$ 140,000	$ 162,163	$ 22,163	$ 170,271	$ 8,108
Travel	32,400	17,768	(14,632)	18,660	891
Conference Calls	-	-	-	-	-
Total Meeting Expenses	**$ 172,400**	**$ 179,931**	**$ 7,531**	**$ 188,931**	**$ 9,000**
Operating Expenses					
Consultants	$ 175,000	$ 175,000	$ -	$ 150,000	$ (25,000)
Contracts	-	-	-	-	-
Office Rent	-	-	-	-	-
Office Costs	-	-	-	-	-
Professional Services	-	-	-	-	-
Computer Purchase & Maintenance	-	-	-	-	-
Furniture & Equipment	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Contingency	-	-	-	-	-
Total Operating Expenses	**$ 175,000**	**$ 175,000**	**$ -**	**$ 150,000**	**$ (25,000)**
Other Non-Operating Expenses	$ -	$ -	**$ -**	$ -	**$ -**
Total Expenses	**$ 888,287**	**$ 895,819**	**$ 7,531**	**$ 898,750**	**$ 2,932**
Change in Assets	**$ 0**	**$ 567,469**	**$ 567,469**	**$ (0)**	**$ (567,469)**

Summary of Significant Variances — 2008 Projection to 2009 Budget

Funding Sources

- Primary source of funding is dues charged to the Transmission Owners and Operators Forum members who fully support their activities. Funding through assessments to LSEs or designees (mandatory in the United States) is for joint meetings of the Operating and Planning Committees.

Personnel Expenses

- No additional FTEs requested

Meeting Expenses

- The increase is for anticipated inflation

General and Administrative

General and Administrative (in whole dollars)			
	2008 Budget	2008 Projection	2009 Budget
Total FTEs	3.0	6.0	5.0
Total Direct Funding	$3,206,819	$4,112,521	$6,327,164

Background

The General and Administrative department consists of the president and ceo, the executive vice president, the director of inter-governmental affairs, and two administrative assistants. Their responsibilities include oversight and management of all NERC activities, interaction with the Board of Trustees and Regional Entity Management Group, and managing relationships with governmental agencies, regulators, and other industry organizations.

General and Administrative

Funding sources and related expenses for the general and administrative section of the 2009 business plan are shown in the table below.

Statement of Activities
2008 Budget & Projection, and 2009 Budget
General and Administrative

	2008 Budget	2008 Projection	2008 Projection Variance to 2008 Budget Over(Under)	2009 Budget	2009 Budget Variance to 2008 Projection Over(Under)
Funding					
ERO Assessments	$ 3,006,819	$ 3,006,819	$ -	$ 6,127,164	$ 3,120,345
Membership Dues	$ -	$ -	-	$ -	-
Testing Fees	$ -	$ -	-	$ -	-
Services & Software	$ -	$ -	-	$ -	-
Workshops	$ -	$ -	-	$ -	-
Interest	$ 200,000	$ 200,000	-	$ 200,000	-
Miscellaneous	$ -	$ -	-	$ -	-
Total Funding	**$ 3,206,819**	**$ 3,206,819**	**$ -**	**$ 6,327,164**	**$ 3,120,345**
Expenses					
Personnel Expenses					
Salaries	$ 705,081	$ 1,359,399	$ 654,318	$ 1,308,743	$ (50,656)
Payroll Taxes	$ 24,348	$ 48,548	24,200	$ 48,256	(292)
Benefits	$ 50,380	$ 100,453	50,073	$ 113,001	12,548
Retirement Costs	$ 90,110	$ 179,671	89,561	$ 189,768	10,097
Total Personnel Expenses	**$ 869,919**	**$ 1,688,071**	**$ 818,152**	**$ 1,659,768**	**$ (28,303)**
Meeting Expenses					
Meetings	$ 139,000	$ 234,034	$ 95,034	$ 245,735	$ 11,702
Travel	$ 155,900	$ 163,695	7,795	$ 263,975	100,280
Conference Calls	$ 113,000	$ 121,671	8,671	$ 73,872	(47,799)
Total Meeting Expenses	**$ 407,900**	**$ 519,399**	**$ 111,499**	**$ 583,582**	**$ 64,183**
Operating Expenses					
Consultants	$ -	$ -	$ -	$ -	$ -
Contracts	$ -	$ -	-	$ -	-
Office Rent	$ 680,000	$ 680,000	0	$ 711,523	31,523
Office Costs	$ 470,000	$ 446,051	(23,949)	$ 480,973	34,922
Professional Services	$ 720,000	$ 720,000	-	$ 710,000	(10,000)
Computer Purchase & Maintenance	$ -	$ -	-	$ -	-
Furniture & Equipment	$ 59,000	$ 59,000	-	$ -	(59,000)
Miscellaneous	$ -	$ -	-	$ -	-
Contingency	$ -	$ -	-	$ -	-
Total Operating Expenses	**$ 1,929,000**	**$ 1,905,051**	**$ (23,949)**	**$ 1,902,497**	**$ (2,555)**
Other Non-Operating Expenses	$ -	$ -	**$ -**	**$ 2,181,317**	**$ 2,181,317**
Total Expenses	**$ 3,206,819**	**$ 4,112,521**	**$ 905,702**	**$ 6,327,164**	**$ 2,214,643**
Change in Assets	**$ -**	**$ (905,702)**	**$ (905,702)**	**$ -**	**$ 905,702**

Summary of Significant Variances — 2008 Projection to 2009 Budget

Funding Sources

- Primarily funded through assessments to LSEs or designees (mandatory in the United States). Additional funding from interest or cash balances.

Personnel Expenses

- No additional FTEs are requested. One (1) FTE to be reassigned to another function.

Meeting Expenses

- The increase in meeting expenses is for anticipated inflation

Other Operating Expenses

- In the 2009 budget the amount necessary to increase the cash reserve balance to 10 percent of net assessments is included in "ERO Assessments" and "Other Non-Operating Expenses" on the Statement of Activities. In the past, this amount was not included in the assessments budget but was included in the actual assessments to LSEs creating an ongoing need for an explanation of the variance.
- The amount included in "ERO Assessments" and "Other Non-Operating Expenses" to increase the cash reserve balance to 10 percent of assessments is $2,054,293 (see Table 5 on page 71). Also included is $127,024 for 2007 assessments which are uncollectable.

Legal and Regulatory

Legal and Regulatory (in whole dollars)			
	2008 Budget	2008 Projection	2009 Budget
Total FTEs	5.0	3.0	4.0
Total Direct Funding	$1,601,283	$1,459,970	$3,459,703

Background

The legal department will provide legal advice to the CEO, Board of Trustees, staff, and stakeholders on all legal and regulatory matters affecting NERC; review items filed with governmental units for legal sufficiency; maintain relationships with the United States, Canadian, and Mexican jurisdictions; review all contracts; and retain and oversee work of outside counsel.

2009 Goals and Objectives

- Obtain recognition of NERC as the electric reliability organization in all nine Canadian jurisdictions.
- Achieve mandatory reliability standards in all nine Canadian jurisdictions, with enforcement comparable to that in the United States.
- Complete and file with the Federal Energy Regulatory Commission the three-year performance assessment of NERC and the Regional Entities required by section 39.3(c) of the Commission's regulations and the July 20, 2006 Order Certifying NERC as the "electric reliability organization" under Section 215 of the Federal Power Act.
- Obtain regulatory approvals for new and revised reliability standards on a timely basis.
- Process all appeals of compliance actions in an effective and efficient manner.

In order to achieve the goals and objectives as stated above, the Legal and Regulatory department will need to hire one additional attorney.

Section 39.3(c) of the Commission's regulations require NERC to file a performance assessment three years following its certification as the "electric reliability organization" under section 215 of the Federal Power Act and every five years thereafter. NERC's first performance assessment is due July 20, 2009. As a part of its performance assessment, NERC must include a performance assessment for each of the eight organizations designated as regional entities in the delegation agreements that NERC entered into and FERC approved. Section 39.3(c)(1) of FERC's regulations is specific about what must be included in the performance assessment:

> "(1) The Electric Reliability Organization's assessment of its performance shall include:
>
> "(i) An explanation of how the Electric Reliability Organization satisfies the requirements of § 39.3(b) [NOTE: Section 39.3(b) sets out the criteria NERC had to meet to become certified as the electric reliability organization];
>
> "(ii) Recommendations by Regional Entities, users, owners, and operators of the Bulk-Power System, and other interested parties for improvement of the Electric Reliability Organization's operations, activities, oversight and

procedures, and the Electric Reliability Organization's response to such recommendations; and

"(iii) The Electric Reliability Organization's evaluation of the effectiveness of each Regional Entity, recommendations by the Electric Reliability Organization, users, owners, and operators of the Bulk-Power System, and other interested parties for improvement of the Regional Entity's performance of delegated functions, and the Regional Entity's response to such evaluation and recommendations."

To satisfy the requirement for the July 2009 performance assessment, NERC must assess its own performance using the criteria identified by the Commission, and in addition, must evaluate the effectiveness of the eight regional entities. To the extent it is possible to carry out the performance assessments without jeopardizing ongoing programs, NERC will do so. However, NERC believes it will be necessary to retain consulting services to assist in carrying out the performance assessments and preparing the filing. NERC estimates the cost of the consulting service for the assessment of NERC itself will be $300,000 and the cost for the assessment of each region will be $150,000. Because the requirement for the performance assessment was established in orders of the Federal Energy Regulatory Commission, NERC will allocate the costs of the performance assessment only to U.S. entities.

Legal and Regulatory

Funding sources and related expenses for the general and administrative section of the 2009 business plan are shown in the table below.

Statement of Activities
2008 Budget & Projection, and 2009 Budget
Legal and Regulatory

	2008 Budget	2008 Projection	2008 Projection Variance to 2008 Budget Over(Under)	2009 Budget	2009 Budget Variance to 2008 Projection Over(Under)
Funding					
ERO Assessments	$ 1,601,283	$ 1,601,283	$ -	$ 3,459,703	$ 1,858,420
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding	**$ 1,601,283**	**$ 1,601,283**	**$ -**	**$ 3,459,703**	**$ 1,858,420**
Expenses					
Personnel Expenses					
Salaries	$ 848,599	$ 651,012	$ (197,587)	$ 961,205	$ 310,193
Payroll Taxes	39,344	30,183	(9,161)	38,414	8,231
Benefits	84,142	64,550	(19,592)	88,966	24,416
Retirement Costs	74,898	57,459	(17,439)	126,437	68,978
Total Personnel Expenses	**$ 1,046,983**	**$ 803,204**	**$ (243,779)**	**$ 1,215,023**	**$ 411,818**
Meeting Expenses					
Meetings	$ 3,000	$ 3,000	$ -	$ 3,000	$ -
Travel	51,300	37,715	(13,585)	75,000	37,285
Conference Calls	-	-	-	-	-
Total Meeting Expenses	**$ 54,300**	**$ 40,715**	**$ (13,585)**	**$ 78,000**	**$ 37,285**
Operating Expenses					
Consultants	$ -	$ -	$ -	$ 1,500,000	$ 1,500,000
Contracts	-	108,000	108,000	108,000	-
Office Rent	-	-	-	-	-
Office Costs	-	8,050	8,050	8,680	630
Professional Services	500,000	500,000	-	550,000	50,000
Computer Purchase & Maintenance	-	-	-	-	-
Furniture & Equipment	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Contingency	-	-	-	-	-
Total Operating Expenses	**$ 500,000**	**$ 616,050**	**$ 116,050**	**$ 2,166,680**	**$ 1,550,630**
Other Non-Operating Expenses	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Expenses	**$ 1,601,283**	**$ 1,459,970**	**$ (141,313)**	**$ 3,459,703**	**$ 1,999,733**
Change in Assets	**$ -**	**$ 141,313**	**$ 141,313**	**$ -**	**$ (141,313)**

Summary of Significant Variances — 2008 Projection to 2009 Budget

Funding Sources

- Funding for this program is provided through assessments to LSEs or designees (mandatory in the United States)

Personnel Expenses

- One additional FTE is requested

Operating Expenses

- Consultants: $1.5 million anticipated as the cost of self assessment required by FERC. This cost to be assessed to LSEs or designees in the United States only.

Information Technology

Information Technology (in whole dollars)			
	2008 Budget	2008 Projection	2009 Budget
Total FTEs	8.0	8.0	9.0
Total Direct Funding	$2,303,735	$2,221,901	$2,526,851

Background

NERC relies on Information Technology (IT) to achieve its reliability mission. IT provides the foundational computer networks, systems, and tools that drive NERC's day-to-day business processes and ensures that these information assets meet NERC's existing and future needs. IT also supports the development, implementation, and operation of reliability tools used by system operators and others to monitor system conditions in near-real time.

Responsibilities encompass a variety of complex technical, administrative, and supervisory work in the development, installation, and maintenance of information technology systems. IT goals include, but are not limited to:

- Establishing and directing the strategic long-term goals, policies, and procedures of NERC's information technology department, which complement NERC's strategic goals and reliability mission.
- Assessing NERC's evolving business environment and recommending technology solutions to drive productivity, efficiency, and effectiveness.
- Planning and implementing organization-wide information systems, services, and network facilities, including local area networks, wide-area networks, and peripheral systems to meet the needs of a large, diverse user base, both internal and external to NERC.
- Ensuring all information systems are functional and secure, and that all applications running on those systems meet business requirements for performance, availability, and security.
- Creating and managing an information security program aimed at reducing risk to acceptable levels.

Information Technology Objectives

- Achieve compliance with NERC's Cyber Security Standards CIP-002–CIP-009 by June 30, 2009.
- Continue the development, integration, and expansion of databases and applications into a unified NERC-wide Information Management System. This system will ultimately feed active content to NERC's Web site.
- Initiate the second phase of NERC's Web site redesign project.
  - Create and automate processes to deliver active content to the Web site.
  - Implement the business rules governing the creation of content as well as the review and approval criteria for publication.

  - Introduce collaboration tools to allow for the ready flow of information between applications and between users.
- Work with SAIS to deliver tools to enhance situation awareness.
  - Continue development of the Situation Awareness Tool through additional pilot phases for new users.
  - Identify and deploy an emergency notification system.
  - Assist in the design and build-out of a Situation Awareness Monitoring Center.
- Enhance IT infrastructure to better support a growing staff in multiple locations.
  - Redesign telecommunications networks for increased throughput and redundancy.
  - Create and implement plans to redeploy business-critical systems in redundant, high availability configurations.

In order to achieve the goals and objectives as stated above, the IT department will need to hire one additional FTE. This FTE will be responsible for managing new and ongoing projects, such as the Information Management System, which will improve the efficiency and effectiveness of NERC's business processes, and ensure business needs are met in a timely, cost-effective manner.

Information Technology

Funding sources and related expenses for the information technology section of the 2009 business plan are shown in the table below.

Statement of Activities
2008 Budget & Projection, and 2009 Budget
Information Technology

	2008 Budget	2008 Projection	2008 Projection Variance to 2008 Budget Over(Under)	2009 Budget	2009 Budget Variance to 2008 Projection Over(Under)
Funding					
ERO Assessments	$ 2,303,735	$ 2,303,735	$ -	$ 2,526,851	$ 223,116
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding	**$ 2,303,735**	**$ 2,303,735**	**$ -**	**$ 2,526,851**	**$ 223,116**
Expenses					
Personnel Expenses					
Salaries	$ 843,695	$ 892,243	$ 48,548	$ 948,208	$ 55,966
Payroll Taxes	57,439	60,744	3,305	69,566	8,822
Benefits	131,470	139,035	7,565	125,337	(13,698)
Retirement Costs	115,531	122,179	6,648	129,842	7,664
Total Personnel Expenses	**$ 1,148,135**	**$ 1,214,201**	**$ 66,066**	**$ 1,272,954**	**$ 58,754**
Meeting Expenses					
Meetings	$ -	$ -	$ -	$ 5,500	$ 5,500
Travel	30,600	38,000	7,400	46,638	8,638
Conference Calls	-	-	-	-	-
Total Meeting Expenses	**$ 30,600**	**$ 38,000**	**$ 7,400**	**$ 52,138**	**$ 14,138**
Operating Expenses					
Consultants	$ 250,000	$ 250,000	$ -	$ 270,000	$ 20,000
Contracts	-	-	-	-	-
Office Rent	-	-	-	-	-
Office Costs	275,000	119,700	(155,300)	204,184	84,484
Professional Services	-	-	-	-	-
Computer Purchase & Maintenance	600,000	600,000	-	642,575	42,575
Furniture & Equipment	-	-	-	85,000	85,000
Miscellaneous	-	-	-	-	-
Contingency	-	-	-	-	-
Total Operating Expenses	**$ 1,125,000**	**$ 969,700**	**$ (155,300)**	**$ 1,201,759**	**$ 232,059**
Other Non-Operating Expenses	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Expenses	**$ 2,303,735**	**$ 2,221,901**	**$ (81,834)**	**$ 2,526,851**	**$ 304,951**
Change in Assets	**$ -**	**$ 81,834**	**$ 81,834**	**$ -**	**$ (81,834)**

Summary of Significant Variances — 2008 Projection to 2009 Budget

Funding Sources

- Funding for this program is provided through assessments to LSEs or designees (mandatory in the United States)

Personnel Expenses

- One additional FTE is requested for 2009

Operating Expenses

- Furniture and Equipment: Leasehold improvements needed for re-wiring the New Jersy facility and to add air conditioning and fire suppression to the computer room
- Office costs: For the 2008 projection, internet costs for the Princeton, New Jersey and Washington, D.C. offices is being charged to General and Adminstrative creating a projected "underspend" versus budget of ($155,300)

Human Resources

Human Resources (in whole dollars)			
	2008 Budget	2008 Projection	2009 Budget
Total FTEs	3.5	3.5	4.5
Total Direct Funding	$473,958	$514,394	$711,175

Background

NERC has assembled an exceptional team of highly qualified employees to carry out the activities of the ERO. By the end of 2009, NERC expects to increase its resources to 119.5 employees.

The human resources department, in adherence with applicable federal and state laws, designs, plans, and implements human resources policies and procedures, including staffing, compensation, benefits, employee relations, and training and development.

Included in the human resources budget is $100,000 to accommodate the possibility of executive-level search firm fees.

2009 Goals and Objectives

- Recruit qualified employees to fulfill the activities of the ERO.
- Provide training programs.
- Review employee benefits.

In order to achieve the goals and objectives as stated above, the HR department will need to hire a benefits administrator.

Human Resources

Funding sources and related expenses for the human resources section of the 2009 business plan are shown in the table below.

Statement of Activities
2008 Budget & Projection, and 2009 Budget
Human Resources

	2008 Budget	2008 Projection	2008 Projection Variance to 2008 Budget Over(Under)	2009 Budget	2009 Budget Variance to 2008 Projection Over(Under)
Funding					
ERO Assessments	$ 473,958	$ 473,958	$ -	$ 711,175	$ 237,217
Membership Dues	$ -	$ -	$ -	$ -	$ -
Testing Fees	$ -	$ -	$ -	$ -	$ -
Services & Software	$ -	$ -	$ -	$ -	$ -
Workshops	$ -	$ -	$ -	$ -	$ -
Interest	$ -	$ -	$ -	$ -	$ -
Miscellaneous	$ -	$ -	$ -	$ -	$ -
Total Funding	**$ 473,958**	**$ 473,958**	**$ -**	**$ 711,175**	**$ 237,217**
Expenses					
Personnel Expenses					
Salaries	$ 289,910	$ 300,698	$ 10,788	$ 385,799	$ 85,101
Payroll Taxes	$ 18,125	$ 18,799	$ 674	$ 25,893	$ 7,093
Benefits	$ 124,437	$ 129,067	$ 4,630	$ 143,838	$ 14,770
Retirement Costs	$ 32,486	$ 33,695	$ 1,209	$ 38,295	$ 4,600
Total Personnel Expenses	**$ 464,958**	**$ 482,260**	**$ 17,302**	**$ 593,825**	**$ 111,565**
Meeting Expenses					
Meetings	$ -	$ -	$ -	$ -	$ -
Travel	$ 9,000	$ 10,784	$ 1,784	$ 11,000	$ 216
Conference Calls	$ -	$ -	$ -	$ -	$ -
Total Meeting Expenses	**$ 9,000**	**$ 10,784**	**$ 1,784**	**$ 11,000**	**$ 216**
Operating Expenses					
Consultants	$ -	$ 15,000	$ 15,000	$ 100,000	$ 85,000
Contracts	$ -	$ -	$ -	$ -	$ -
Office Rent	$ -	$ -	$ -	$ -	$ -
Office Costs	$ -	$ 6,350	$ 6,350	$ 6,350	$ -
Professional Services	$ -	$ -	$ -	$ -	$ -
Computer Purchase & Maintenance	$ -	$ -	$ -	$ -	$ -
Furniture & Equipment	$ -	$ -	$ -	$ -	$ -
Miscellaneous	$ -	$ -	$ -	$ -	$ -
Contingency	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses	**$ -**	**$ 21,350**	**$ 21,350**	**$ 106,350**	**$ 85,000**
Other Non-Operating Expenses	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Expenses	**$ 473,958**	**$ 514,394**	**$ 40,436**	**$ 711,175**	**$ 196,781**
Change in Assets	**$ -**	**$ (40,436)**	**$ (40,436)**	**$ -**	**$ 40,436**

Summary of Significant Variances — 2008 Projection to 2009 Budget

Funding Sources

- Funding for this program is provided through assessments to LSEs or designees (mandatory in the United States)

Personnel Expenses

- One additional FTE is requested

Operating Expenses

- Consultants: Anticipated cost of executive search firm

Finance and Accounting

Finance and Accounting (in whole dollars)			
	2008 Budget	2008 Projection	2009 Budget
Total FTEs	5.0	5.0	6.0
Total Direct Funding	$885,573	$894,459	$970,864

Background

NERC will file its 2009 Business Plan and Budget, the 2009 Business Plans and Budgets of the Regional Entities, and the 2009 funding request of the Western Interconnection Regional Advisory Body ("2009 ERO Budget Filing") with FERC and the applicable governmental authorities in Canada. The 2009 budget filing will include supporting schedules detailing all proposed assessments, dues, fees, and other charges as well as proposed expenditures for statutory and nonstatutory activities.

The Finance and Accounting department will direct the financial plans and accounting practices of the organization; oversee treasury, accounting, budget, tax and audit activities; and monitor financial and accounting controls and standards.

Finance and Accounting Objectives

- Participate in completing the three-year performance assessment of NERC and an evaluation of the effectiveness of each Regional Entity.
- Evaluate and recommend the implementation of budgeting software across NERC and the Regional Entities to achieve greater consistency in the annual budgeting process.
- Participate in reviewing and updating of employee benefit plans.
- Complete the NERC and Regional Entity true-up filing.
- Implement an initiative tracking mechanism.
- Develop procedures and accounting processes for the application of penalties to future assessments.
- Institute an internal audit function.
- Establish program specific expense tracking systems.
- Provide advice from the financial perspective on contracts into which the organization may enter.

In order to achieve the goals and objectives as stated above, the Finance and Accounting department will need to hire one financial analyst.

Finance and Accounting

Funding sources and related expenses for the accounting and finance section of the 2009 business plan are shown in the table below.

Statement of Activities
2008 Budget & Projection, and 2009 Budget
Finance and Accounting

	2008 Budget	2008 Projection	2008 Projection Variance to 2008 Budget Over(Under)	2009 Budget	2009 Budget Variance to 2008 Projection Over(Under)
Funding					
ERO Assessments	$ 885,573	$ 885,573	$ -	$ 970,864	$ 85,291
Membership Dues	-	-	-	-	-
Testing Fees	-	-	-	-	-
Services & Software	-	-	-	-	-
Workshops	-	-	-	-	-
Interest	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Total Funding	**$ 885,573**	**$ 885,573**	**$ -**	**$ 970,864**	**$ 85,291**
Expenses					
Personnel Expenses					
Salaries	$ 498,523	$ 527,415	$ 28,892	$ 620,482	$ 93,067
Payroll Taxes	30,988	32,784	1,796	41,917	9,133
Benefits	82,954	87,762	4,809	84,153	(3,609)
Retirement Costs	60,509	64,016	3,507	82,182	18,167
Total Personnel Expenses	**$ 672,974**	**$ 711,976**	**$ 39,003**	**$ 828,734**	**$ 116,758**
Meeting Expenses					
Meetings	$ -	$ 14,175	$ 14,175	$ 15,000	$ 825
Travel	12,600	16,308	3,708	24,910	8,602
Conference Calls	-	-	-	-	-
Total Meeting Expenses	**$ 12,600**	**$ 30,483**	**$ 17,883**	**$ 39,910**	**$ 9,427**
Operating Expenses					
Consultants	$ -	$ -	$ -	$ -	$ -
Contracts	-	-	-	-	-
Office Rent	-	-	-	-	-
Office Costs	-	2,000	2,000	2,220	220
Professional Services	200,000	150,000	(50,000)	100,000	(50,000)
Computer Purchase & Maintenance	-	-	-	-	-
Furniture & Equipment	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Contingency	-	-	-	-	-
Total Operating Expenses	**$ 200,000**	**$ 152,000**	**$ (48,000)**	**$ 102,220**	**$ (49,780)**
Other Non-Operating Expenses	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Expenses	**$ 885,574**	**$ 894,459**	**$ 8,885**	**$ 970,864**	**$ 76,405**
Change in Assets	**$ (1)**	**$ (8,886)**	**$ (8,885)**	**$ -**	**$ 8,886**

Summary of Significant Variances — 2008 Projection to 2009 Budget

Funding Sources

- Funding for this program is provided through assessments to LSEs or designees (mandatory in the United States)

Personnel Expenses

- One additional FTE is requested

Operating Expenses

- Professional Services: 2008 projection includes $100,000 to begin NERC self-assessment as required by FERC. This cost budgeted in Legal in 2009.

Section B — 2009 Schedules

2008 Budget and Projection and 2009 Budget Comparisons

Table 1

Statement of Activities 2008 Budget & Projection, and 2009 Budget STATUTORY	2008 Budget	2008 Projection	2008 Projection Variance to 2008 Budget Over(Under)	2009 Budget	2009 Budget Variance to 2008 Projection Over(Under)
Funding					
ERO Assessments	$ 24,938,994	$ 24,938,994	$ -	$ 36,817,665	$ 9,474,628
Membership Dues	175,000	750,000	575,000	750,000	-
Testing Fees	963,000	963,000	-	981,000	18,000
Services & Software	255,000	260,000	5,000	185,000	(75,000)
Workshops	-	-	-	-	-
Interest	200,000	200,000	-	200,000	-
Miscellaneous	-	-	-	-	-
Total Funding	**$ 26,531,994**	**$ 27,111,994**	**$ 580,000**	**$ 38,933,665**	**$ 9,417,628**
Expenses					
Personnel Expenses					
Salaries	$ 13,187,574	$ 13,611,628	$ 533,413	$ 15,914,093	$ 1,758,138
Payroll Taxes	773,557	787,708	17,536	957,104	136,116
Benefits	1,692,608	1,724,324	34,304	1,810,432	64,229
Retirement Costs	1,261,195	1,348,297	93,178	1,844,579	396,874
Total Personnel Expenses	**$ 16,914,934**	**$ 17,471,957**	**$ 557,023**	**$ 20,526,208**	**$ 3,054,251**
Meeting Expenses					
Meetings	$ 720,500	$ 1,038,075	$ 303,400	$ 1,181,729	$ 137,329
Travel	1,372,700	1,603,108	231,101	2,389,894	732,045
Conference Calls	113,000	121,671	8,671	148,872	27,201
Total Meeting Expenses	**$ 2,206,200**	**$ 2,762,853**	**$ 556,653**	**$ 3,720,495**	**$ 957,642**
Operating Expenses					
Consultants	$ 1,280,000	$ 1,545,000	$ 250,000	$ 4,716,270	$ 1,566,270
Contracts	2,626,860	2,931,860	197,000	3,488,000	556,140
Office Rent	680,000	680,000	0	711,523	31,523
Office Costs	745,000	711,268	105,168	880,102	83,500
Professional Services	1,420,000	1,370,000	-	1,360,000	(10,000)
Computer Purchase & Maintenance	600,000	600,000	-	789,750	147,175
Furniture & Equipment	59,000	59,000	-	560,000	416,000
Miscellaneous	-	-	-	-	-
Contingency	-	-	-	-	-
Total Operating Expenses	**$ 7,410,860**	**$ 7,897,128**	**$ 552,168**	**$ 12,505,645**	**$ 2,790,608**
Other Non-Operating Expenses	**$ -**	**$ -**	**$ -**	**$ 2,181,317**	**$ 2,181,317**
Total Expenses	**$ 26,531,994**	**$ 28,131,939**	**$ 1,599,945**	**$ 38,933,665**	**$ 10,801,727**
Change in Assets	**$ 0**	**$ (1,019,945)**	**$ (1,019,945)**	**$ (0)**	**$ 1,019,945**

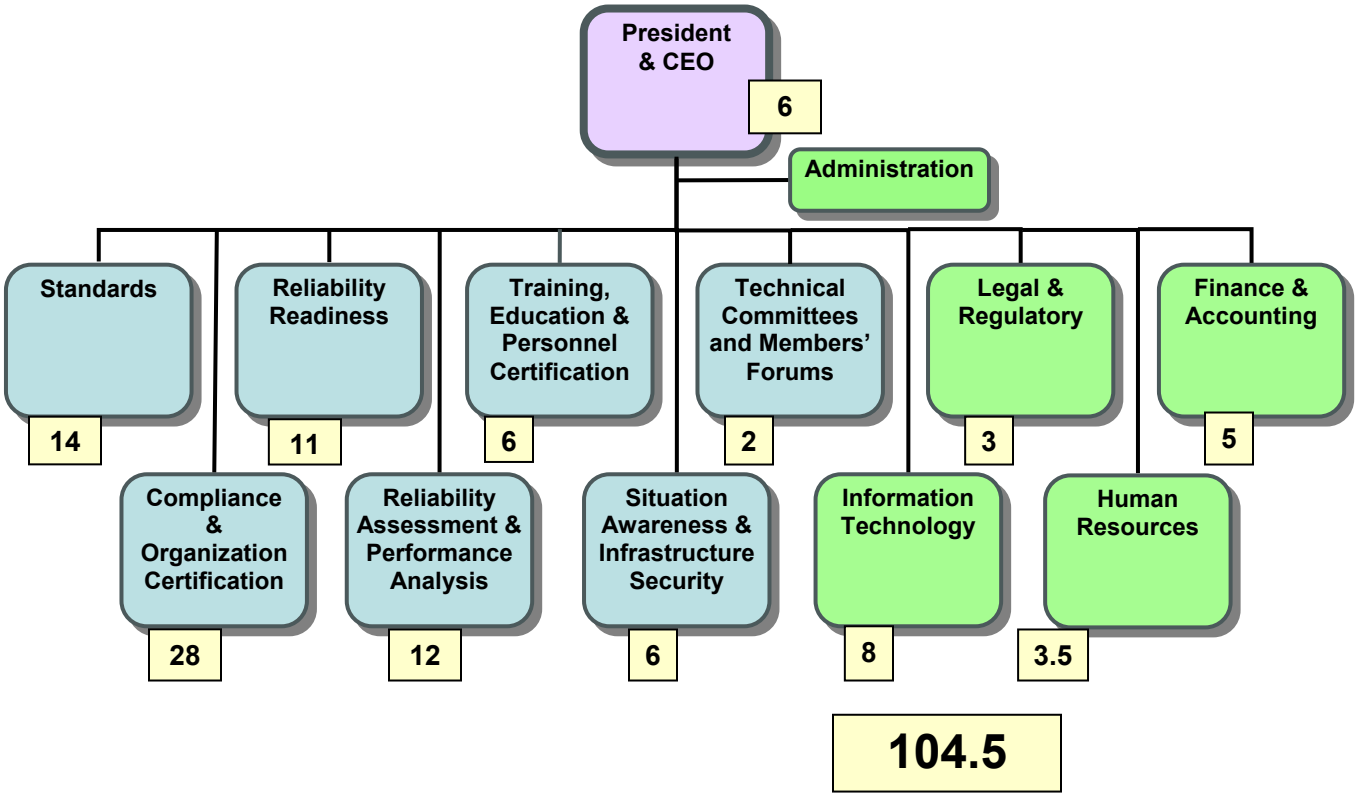
Personnel Analysis

Table 2

Total FTE's by Program Area	Budget 2008	Projection 2008	Budget 2009	Change from Projection
STATUTORY				
Operational Programs				
Reliability Standards	15.0	14.0	15.0	1.0
Compliance and Organization Registration and Certification	26.0	28.0	33.0	5.0
Reliability Readiness Audit and Improvement	12.0	11.0	11.0	0.0
Training and Education	6.0	6.0	6.0	0.0
Reliability Assessment and Performance Analysis	11.0	12.0	14.0	2.0
Situational Awareness and Infrastructure Security	5.0	6.0	10.0	4.0
Total FTEs Operational Programs	**75.0**	**77.0**	**89.0**	**12.0**
Administrative Programs				
Member Forums	2.0	2.0	2.0	0.0
General & Administrative	3.0	6.0	5.0	-1.0
Information Technology	8.0	8.0	9.0	1.0
Legal and Regulatory	5.0	3.0	4.0	1.0
Human Resources	3.5	3.5	4.5	1.0
Accounting	5.0	5.0	6.0	1.0
Total FTEs Administrative Programs	**26.5**	**27.5**	**30.5**	**3.0**
Total FTEs	**101.5**	**104.5**	**119.5**	**15.0**

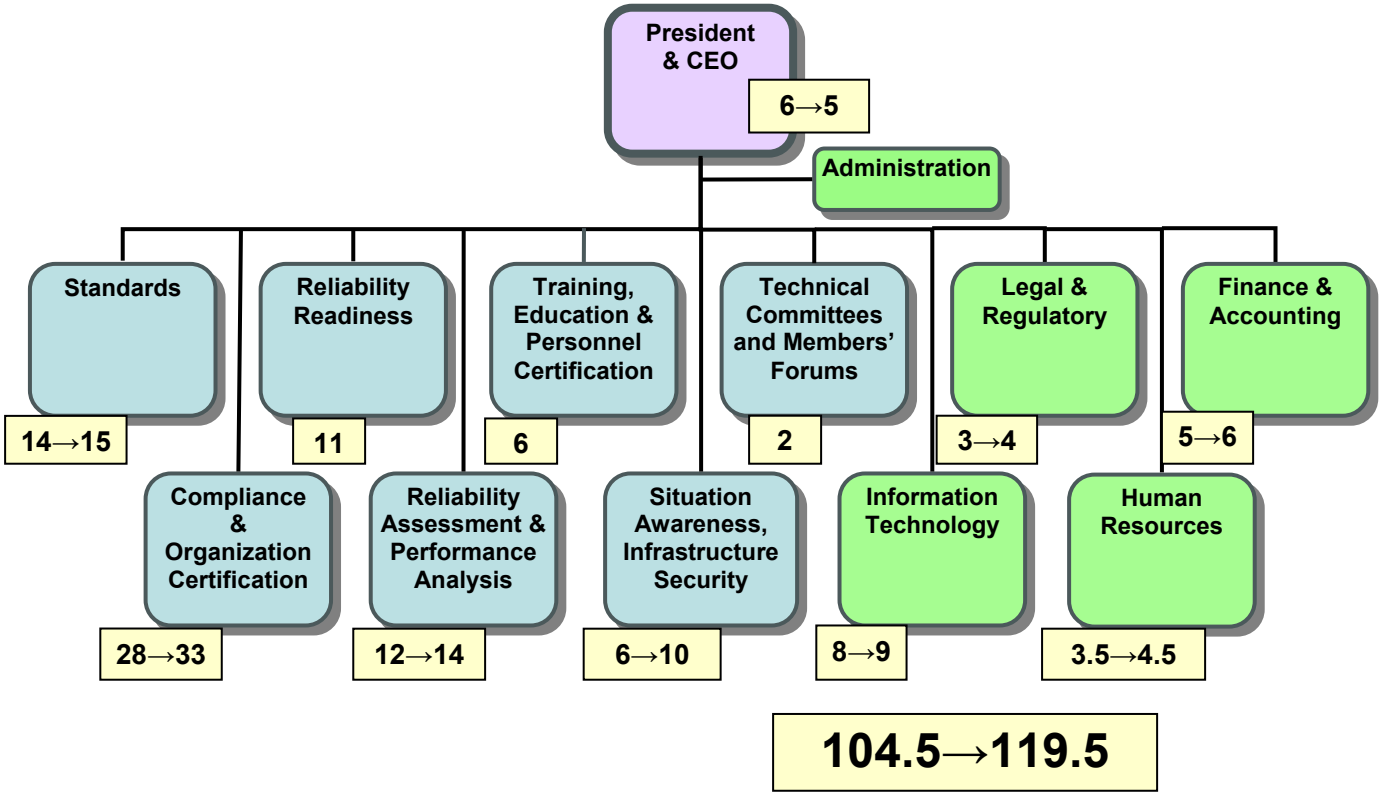
2008 Organizational Chart

Table 3



2009 Organizational Chart

Table 4



Reserve Analysis 2008–2009

Table 5

Reserve Analysis 2008-2009 STATUTORY		
Cash Available 2008		
	Beginning Cash @ January 1, 2008	8,532,029
	Less: 2008 Assessments collected in 2007	(7,683,040)
	2008 ERO Funding (from LSEs or designees)	24,938,994
	2008 Other funding sources (Cash basis)	1,593,000
	Change in assets [1]	
Total Cash Available 2008		27,380,983
Cash Needed 2008		
	2008 Projected expenses (Cash basis)	28,131,939
	Less: 2008 Projected other funding sources	(2,173,000)
	Change in liabilities [2]	
Total Cash Needed 2008		**25,958,939**
Projected Ending Cash Balance, December 31, 2008		**1,422,044**
Desired Cash Balance, December 31, 2009 (10% of Assessments) [3]		3,476,337
Less: Projected Cash Balance December 31, 2008		1,422,044
Increase(decrease) in assessments needed to raise cash balance		2,054,293
2009 Assessment (Personnel, Meeting & Operating Expenses)		36,752,348
2009 Assessment (Non-Operating Expenses)		127,024
2009 Other funding sources		(2,116,000)
Adjustment to increase cash balance		2,054,293
2009 Assessment and reserve adjustment		36,817,665

[1] Assumes all other assets remain at same levels as 12/31/08

[2] Assumes all other liabilities remain at same levels as 12/31/08

[3] *[Comment from Board of Trustees explaining reserve balance required.]-TO BE PROVIDED WITH FINAL DRAFT*

Regional Entity Assessment Analysis

Assessments by Country

Table 6

NOTE: THIS TABLE WILL BE AVAILABLE FOR DRAFT # 2.

Breakdown by Statement of Activity Sections

The following detailed schedules are in support of Table 1, page XX, of the 2009 NERC Business Plan and Budget. All significant variances have been disclosed by program area in the preceding pages.

NOTE: THESE TABLES WILL BE AVAILABLE FOR DRAFT # 2.

Supplemental Funding

Table B-1

Personnel Expenses

Table B-2

Meeting Expenses

Table B-3

Operating Expenses

Table B-4

Table B-5

Table B-6

Table B-7

Table B-8

Table B-9

Table B-10

Table B-11

2009 NERC
STATEMENT OF ACTIVITIES

Statement of Activities 2009 Budget	Total	Statutory Total	Non-Statutory Total	Statutory Total	Reliability Standards (Section 300)	Compliance and Organization Registration and Certification (Section 400 & 500)	Reliability Readiness Audit and Improvement (Section 700)	Reliability Assessment and Performance Analysis (Section 800)	Training and Education (Section 900)	Situational Awareness and Infrastructure Security (Section 1000)	Committee and Member Forums	General and Administrative	Legal and Regulatory	Information Technology	Human Resources	Accounting and Finance
				Functions in Delagation Agreement												
Funding																
ERO Assessments	36,817,665	36,817,665	-	36,817,665	3,284,574	6,687,277	1,987,889	4,136,378	848,409	5,928,632	148,750	6,127,164	3,459,703	2,526,851	711,175	970,864
Membership Dues	750,000	750,000	-	750,000	-	-	-	-	-	-	750,000	-	-	-	-	-
Testing Fees	981,000	981,000	-	981,000	-	-	-	-	981,000	-	-	-	-	-	-	-
Services & Software	185,000	185,000	-	185,000	-	-	-	150,000	-	35,000	-	-	-	-	-	-
Workshops	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest	200,000	200,000	-	200,000	-	-	-	-	-	-	-	200,000	-	-	-	-
Miscellaneous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Funding	38,933,665	38,933,665	-	38,933,665	3,284,574	6,687,277	1,987,889	4,286,378	1,829,409	5,963,632	898,750	6,327,164	3,459,703	2,526,851	711,175	970,864
Expenses																
Personnel Expenses																
Salaries	15,914,093	15,914,093	-	15,914,093	1,925,182	3,928,364	1,375,490	2,061,821	740,375	1,208,023	450,402	1,308,743	961,205	948,208	385,799	620,482
Payroll Taxes	957,104	957,104	-	957,104	122,473	257,407	89,427	123,259	46,210	74,014	20,268	48,256	38,414	69,566	25,893	41,917
Benefits	1,810,432	1,810,432	-	1,810,432	203,611	449,998	141,879	243,551	64,058	103,672	48,367	113,001	88,966	125,337	143,838	84,153
Retirement Costs	1,844,579	1,844,579	-	1,844,579	267,906	297,153	163,009	266,649	107,161	135,395	40,782	189,768	126,437	129,842	38,295	82,182
Total Personnel Expenses	20,526,208	20,526,208	-	20,526,208	2,519,172	4,932,921	1,769,805	2,695,280	957,804	1,521,103	559,819	1,659,768	1,215,023	1,272,954	593,825	828,734
Meeting Expenses																
Meetings	1,181,729	1,181,729	-	1,181,729	343,653	46,856	20,164	165,750	80,000	85,800	170,271	245,735	3,000	5,500	-	15,000
Travel	2,389,894	2,389,894	-	2,389,894	335,000	800,500	187,000	362,733	87,225	177,254	18,660	263,975	75,000	46,638	11,000	24,910
Conference Calls	148,872	148,872	-	148,872	-	-	-	-	75,000	-	-	73,872	-	-	-	-
Total Meeting Expenses	3,720,495	3,720,495	-	3,720,495	678,653	847,356	207,164	528,482	242,225	263,054	188,931	583,582	78,000	52,138	11,000	39,910
Operating Expenses																
Consultants	4,716,270	4,716,270	-	4,716,270	50,000	850,000	-	451,270	45,000	1,300,000	150,000	-	1,500,000	270,000	100,000	-
Contracts	3,488,000	3,488,000	-	3,488,000	-	-	-	435,000	571,400	2,373,600	-	-	108,000	-	-	-
Office Rent	711,523	711,523	-	711,523	-	-	-	-	-	-	-	711,523	-	-	-	-
Office Costs	880,102	880,102	-	880,102	36,750	32,000	10,920	54,171	12,980	30,874	-	480,973	8,680	204,184	6,350	2,220
Professional Services	1,360,000	1,360,000	-	1,360,000	-	-	-	-	-	-	-	710,000	550,000	-	-	100,000
Computer Purchase & Maint.	789,750	789,750	-	789,750	-	25,000	-	122,175	-	-	-	-	-	642,575	-	-
Furniture and Equipment	560,000	560,000	-	560,000	-	-	-	-	-	475,000	-	-	-	85,000	-	-
Miscellaneous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating Expenses	12,505,645	12,505,645	-	12,505,645	86,750	907,000	10,920	1,062,616	629,380	4,179,474	150,000	1,902,497	2,166,680	1,201,759	106,350	102,220
Other Non-Operating Expenses	**2,181,317**	**2,181,317**	**-**	**2,181,317**	-	-	-	-	-	-	-	2,181,317	-	-	-	-
Total Expenses	38,933,665	38,933,665	-	38,933,665	3,284,574	6,687,277	1,987,889	4,286,378	1,829,409	5,963,632	898,750	6,327,164	3,459,703	2,526,851	711,175	970,864
Change in Assets	**(0)**	**(0)**	**-**	**(0)**	**-**	**-**	**-**	**-**	**-**	**-**	**(0)**	**-**	**-**	**-**	**-**	**-**
Allocation of Overhead																
Direct Costs	24,039,158	24,039,158	-	24,039,158	3,284,574	6,687,277	1,987,889	4,286,378	1,829,409	5,963,632						
Indirect Costs Allocation	14,894,507	14,894,507	-	14,894,507	2,510,310	5,522,682	1,840,894	2,342,956	1,004,124	1,673,540						
	38,933,665	**38,933,665**	**-**	**38,933,665**	**5,794,884**	**12,209,960**	**3,828,783**	**6,629,334**	**2,833,533**	**7,637,172**						
FTE's	**119.5**	**119.5**	**0**	**119.5**	**15**	**33**	**11**	**14**	**6**	**10**	**2**	**5**	**4**	**9**	**4.5**	**6**

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2009 NERC Business Plan and Budget Preparation Schedule
(REVISED March 14, 2008)

DATES	NERC	Regional Entity Budgets
December 13, 2007		REBG kick-off meeting. Address open issues from 2008 FERC budget order.
December 2007–January 2008	Development of 3-year work plans. To be presented at February Board of Trustees meeting.	
January 30		Final system of accounts, budget template, and budget procedure document sent to Regional Entities.
February 11–12	NERC Board of Trustees and Member Representatives Committee meetings.	
February–March	Seek input from staff on business plan and budget requirements.[1]	NERC to (1) work with the Regional Entities to establish a standard method by which the Regional Entities' budgets are organized and developed; and (2) work to make the budgets more consistent and more transparent.
February–March	NERC and the Regional Entities to examine the various activities proposed by each Regional Entity to be performed under each statutory function and to determine what activities need to be performed consistently across the Regional Entities. They should develop their budgets for 2008 to reflect the best practices found from this examination.	
March 1		Response due to NERC for April 1 compliance filing
March 12		REBG meeting (Dallas, TX).
April 1	FERC filing — 2008 budget order.	
April 4	Draft #1 of 2009 NERC Business Plan and Budget sent to FAC.	
April 11	FAC conference call to discuss business plan and budget requirements (10 a.m. EDT) ONE HOUR FOR INDUSTRY COMMENT WILL BE PROVIDED.	
April 17		REBG meeting (Charlotte, NC).
April 22	Draft #1 of preliminary business plan and financials to Board of Trustees and Member Representatives Committee with request for initial input (not to include assessment	

[1] Includes management team input on personnel requirements.

DATES	NERC	Regional Entity Budgets
	breakdown). Post draft #1 for stakeholder comment.	
May 1	Initial list of load serving entities obligated to fund ERO and RE costs.	
May 6	Board to be present at Member Representatives Committee meeting for discussion of initial input to draft business plan and financials. TWO HOURS WILL BE DEDICATED TO BUDGET PRESENTATIONS AND DISCUSSION FAC meeting to discuss input from Member Representatives Committee.	
May 7	FAC chair to brief Board of Trustees on status of budget preparations.	
May 7 (p.m.)	BUDGET WORKSHOP — following Board of Trustees meeting in Orlando.	
May 9		Submittal of Regional Entity business plan and budgets (Draft #1) to NERC — **Statutory Functions only**.
May 16	Comments due on Draft #1 of NERC Business Plan and Budget	
May 30	Draft #2 of 2009 NERC Business Plan and Budget to FAC.	Submittal of **COMPLETE** Regional Entity business plan and budget (Draft #2) to NERC
May–June		NERC staff to review preliminary RE budgets for sufficiency, reasonableness, consistency, and transparency of process (need to schedule meeting with each region during this time).
June 6	FAC conference call to approve DRAFT #2 (tentatively scheduled for 10 a.m. EDT). ONE HALF-HOUR FOR INDUSTRY COMMENT WILL BE PROVIDED	
June 13	Posting of draft #2 for stakeholder input.	
July 1	FINAL list of load serving entities obligated to fund ERO and RE costs, with estimated share of costs assigned to each entity.	
July 2	FAC conference call agenda to be sent and posted. Need RE draft BP&B to include in agenda	
July 3	Comments due on Draft #2 of NERC Business Plan and Budget	
Prior to July 9		Final RE budget submittal due – approved by RE board
July 11	FAC conference call and web cast to review RE budget submittals and agree on final business plan, budgeted financials, and assessments to be sent to the Board for approval (scheduled for 10:00 a.m. EDT)	
July 15	Final draft of business plan, budgeted financials, RE budgets, and assessments to Board of Trustees and Member Representatives Committee.	
July 29	Presentation of 2009 Business Plan and Budget to Member Representatives Committee for review.	

DATES	NERC	Regional Entity Budgets
July 30	Business plan, budgeted financials, and assessments presented to Board of Trustees for approval.	
August 25	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.	

Agenda Item 8
MRC Meeting
May 6, 2008

Wind Generation Integration

MRC Action Required
Discussion

Information
A presentation on wind generation integration issues developed by Warren Frost, Vice President Operations and Reliability, AESO and Jim McIntosh, Director Grid Operations, CAISO was included in the background material for the February 11, 2008 MRC meeting. At this meeting, Mr. Frost will present background information on the topic of wind generation integration, as well as the recent work by the newly formed NERC Integration of Variable Generation Task Force (IVGTF). The task force's scope includes preparing a concepts document to address the philosophical and technical considerations for integrating variable resources into the bulk power system, and to develop specific recommendations for practices and requirements, including concepts for potential reliability standards, that cover the planning, operations planning, and real-time operating horizons. Mr. Frost chairs this new task force that reports to the Planning Committee.

Agenda Item 8
MRC Meeting
May 6, 2008

Warren Frost
Vice President, Operations and Reliability

Wind Integration Issues

NERC Operating Committee

Jim McIntosh
Director, Grid Operations

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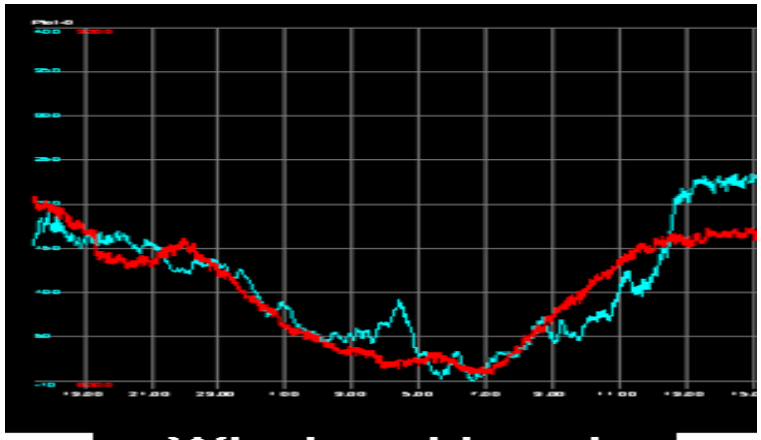
Overview

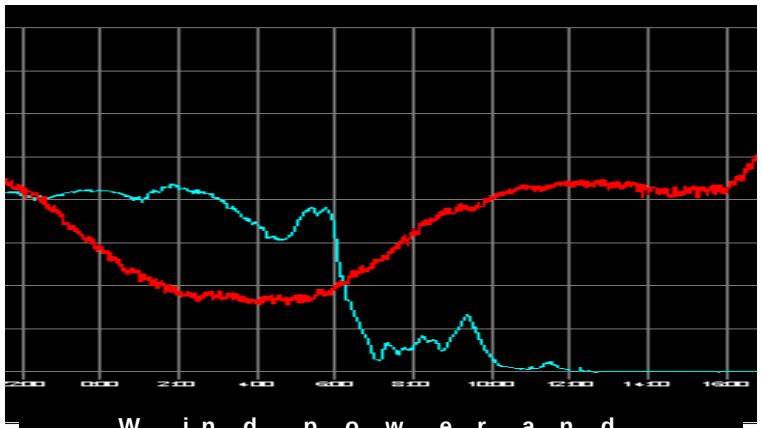
- **What are the operational issues?**
  - What are the impacts and what should we pay attention to?
- **What are potential solutions?**
  - Forecasting and Operator tools
  - Backstop generation
  - Wind Power Limiting/Curtailment
  - Interties (subject to rules/standards)
  - Storage
  - Demand side
- **Transmission**
- **We must maintain reliability**

Operational Issues - AESO

- Output can be counter to load ramps or faster than the system ramp
- Unpredictable patterns – operators need to consider wind variability and prevent large imbalances from occurring
- Low capacity factor – can be zero at times of peak
- Variability during disturbances or restoration efforts – may not be tolerated
- Voltage Issues – new wind technologies will meet reliability requirements including LVRT and reactive support
- May create oversupply conditions



Wind and Load correlate well



Wind power and load do not correlate well

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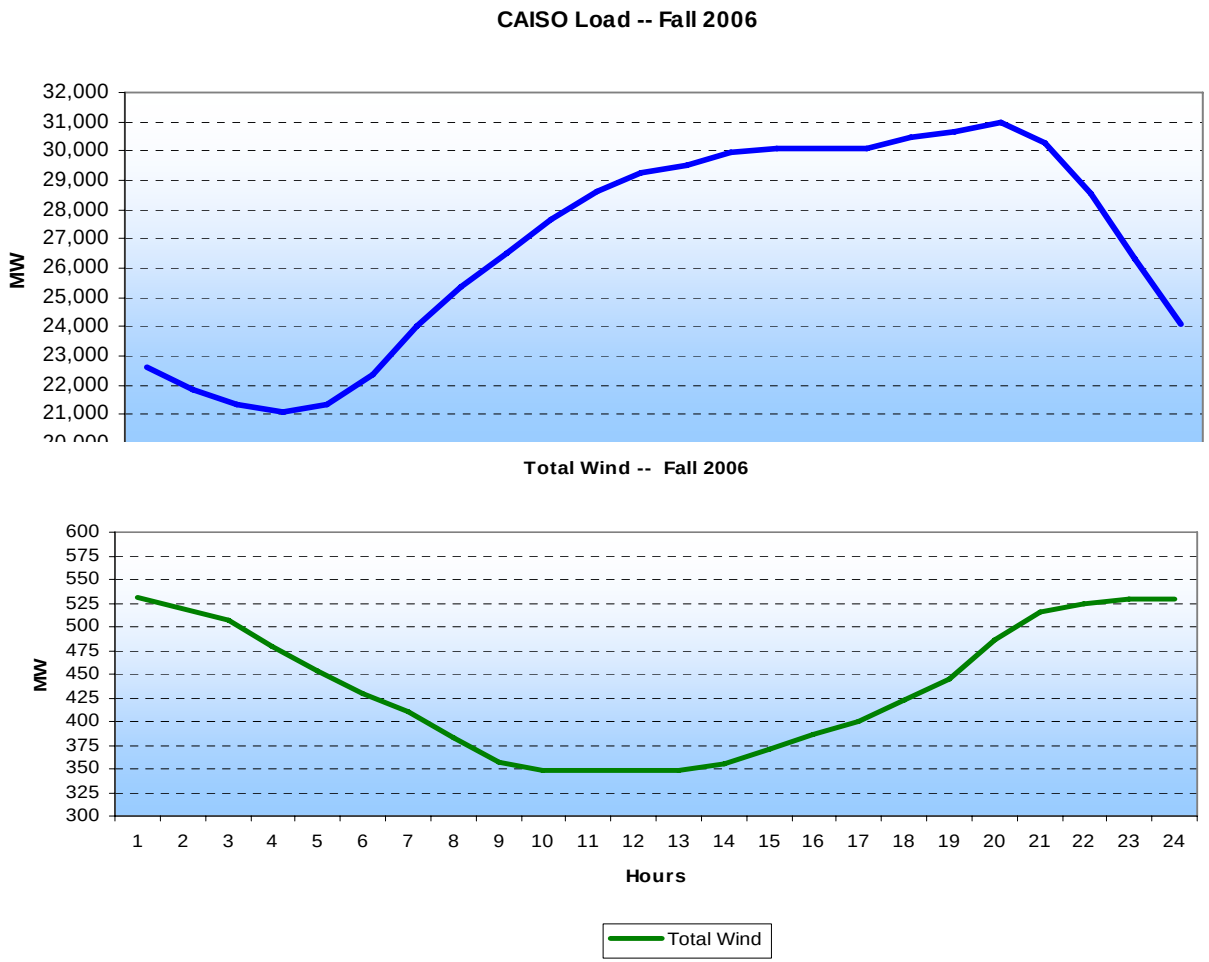
Wind generation tends to be inversely correlated to daily load curve, creating ramping impacts - CAISO



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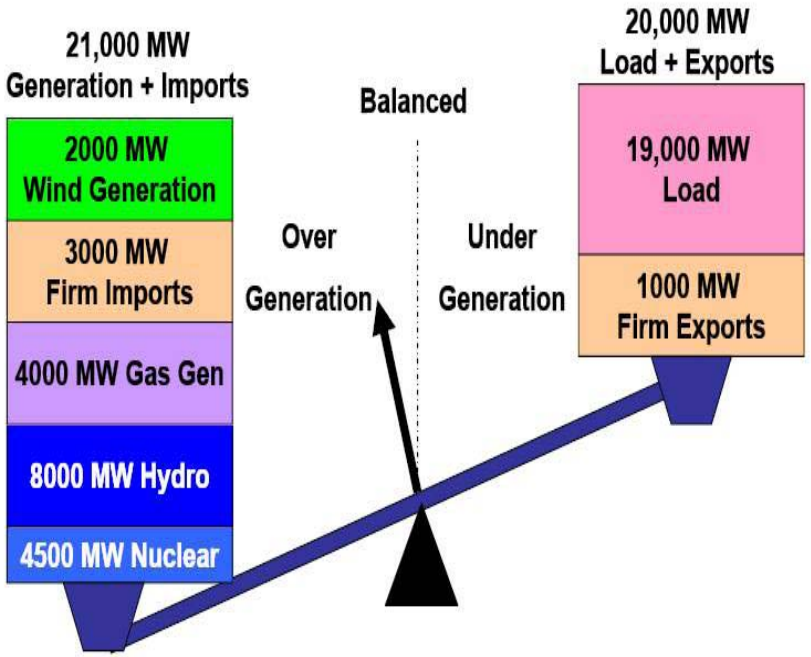
Typical Oversupply Conditions - CAISO

- Light load conditions – loads around 22,000 MW or less,
- All the nuclear plants on-line and at maximum production,
- Hydro generation at high production levels due to rapid snow melt in the mountains,
- Long start thermal units on line and operating at their Pmin levels because they are required for future operating hours,
- Other generation in a “Must Take” status or required for local reliability reasons, and
- Wind generation at high production levels.



Imbalance between Generation and Load

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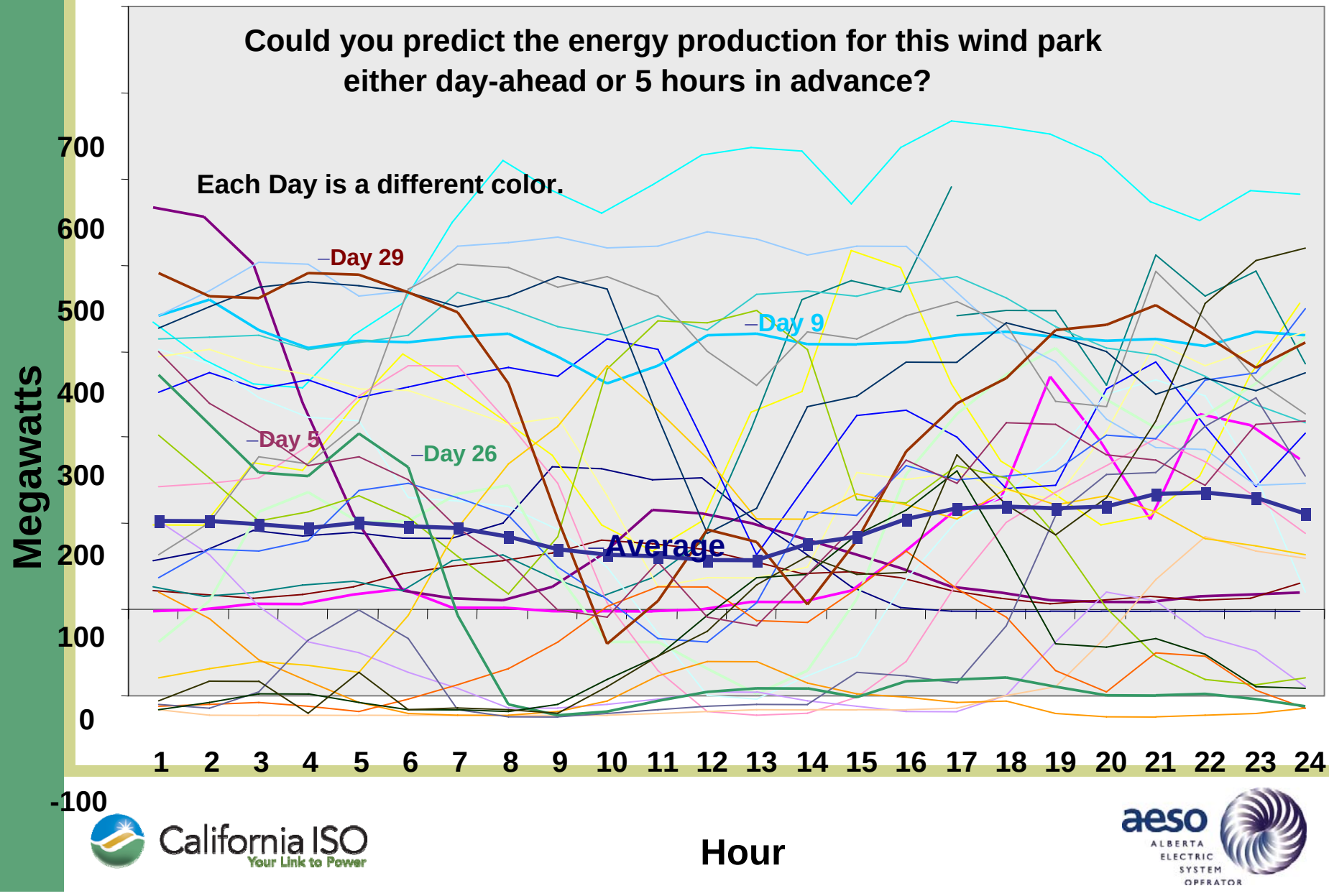
Tehachapi Wind Generation in April – 2005



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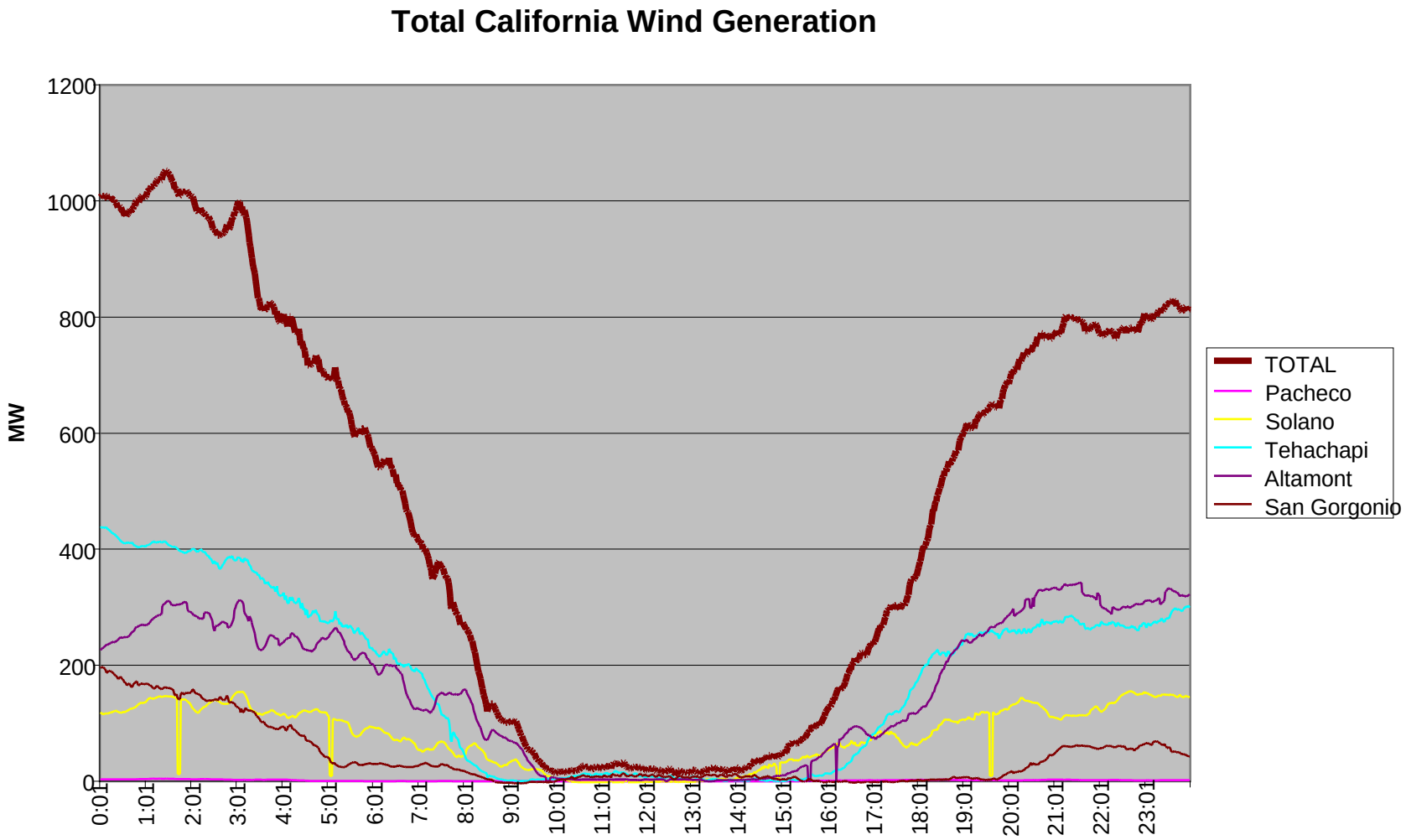
Wind generation output changes quickly – diversity?



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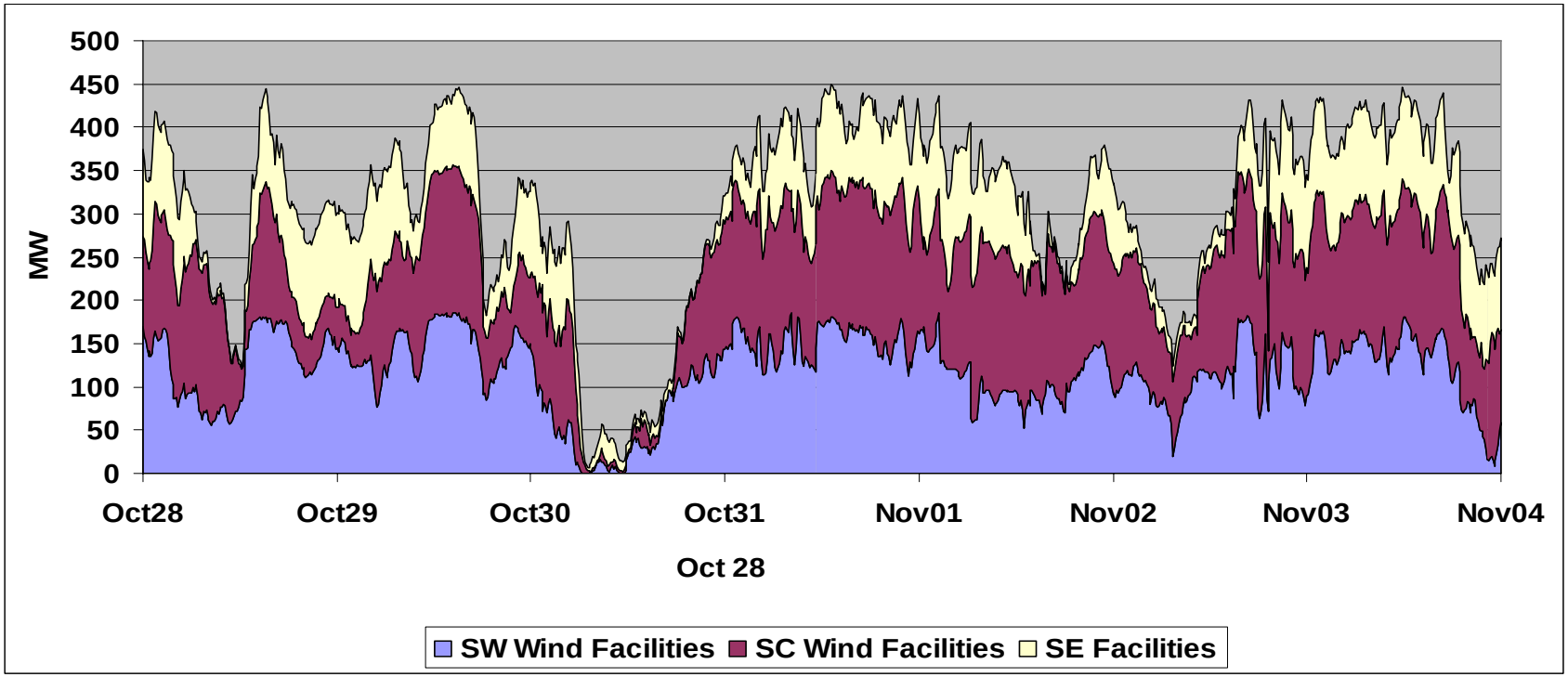
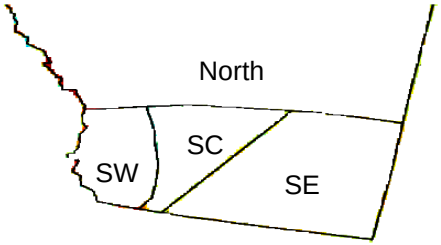
Wind generation output changes quickly – diversity?



South West (SW) = 212.3 MW
South Central (SC) = 176.2 MW
South East (SE) = 110.0 MW



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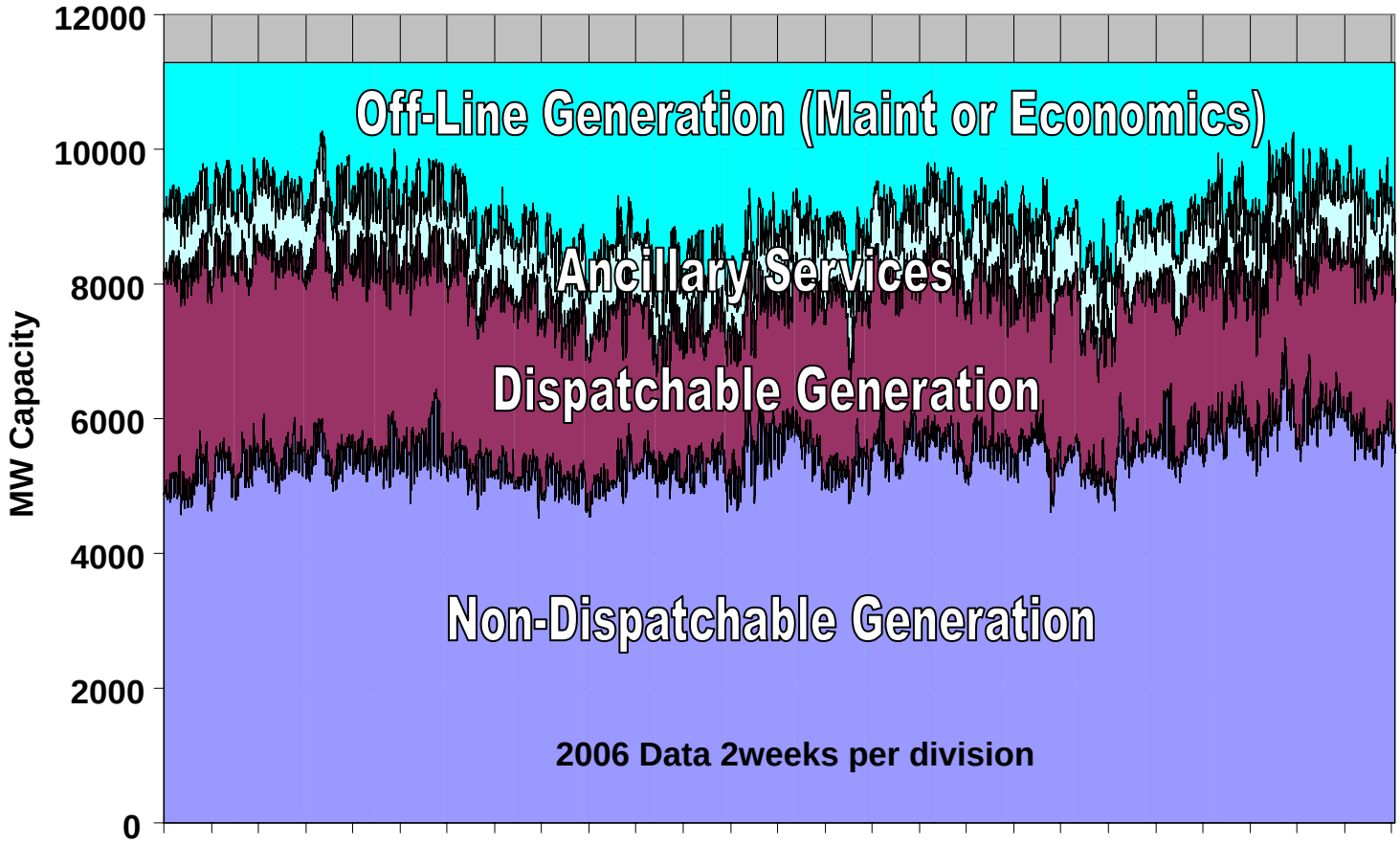
Limits to Dispatchable Resources - AESO



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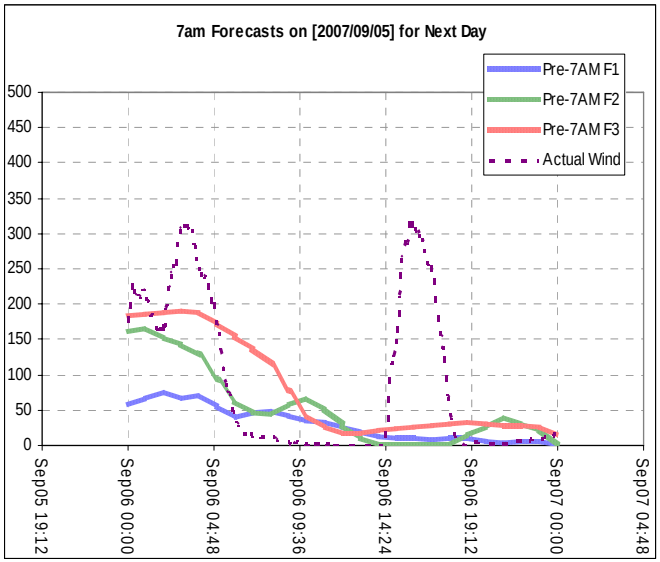
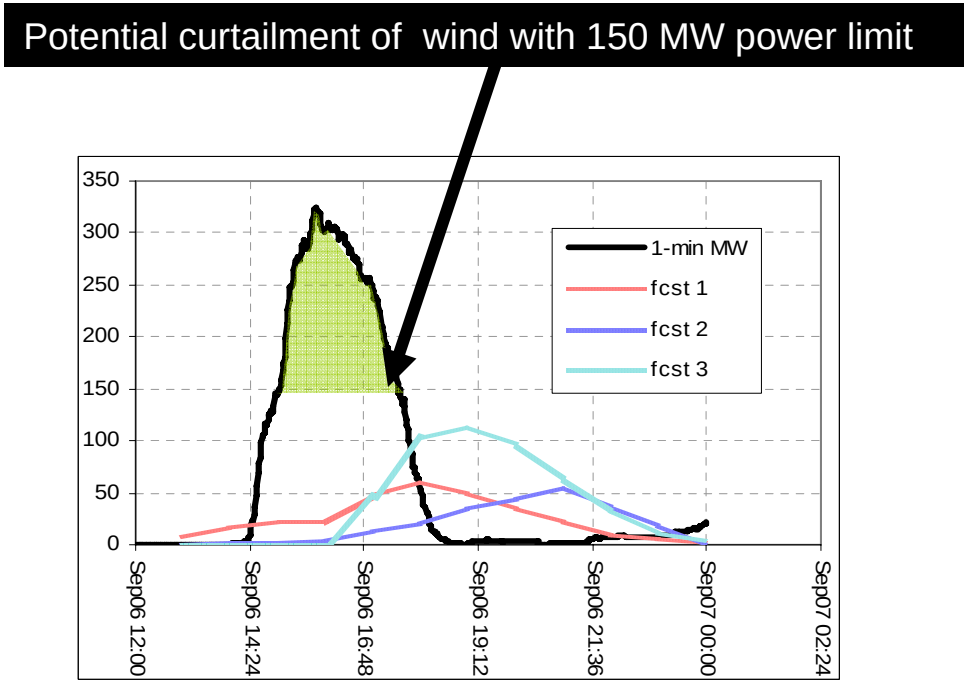
Wind Power Management - Ramping Events

- When forecasts miss an event, the only available resources for the operator are dispatchable resources and Wind Power Management
- If there are insufficient resources to handle the ramps, power limiting would be used



Day ahead forecasts miss the event



2 hour ahead forecast missed the event

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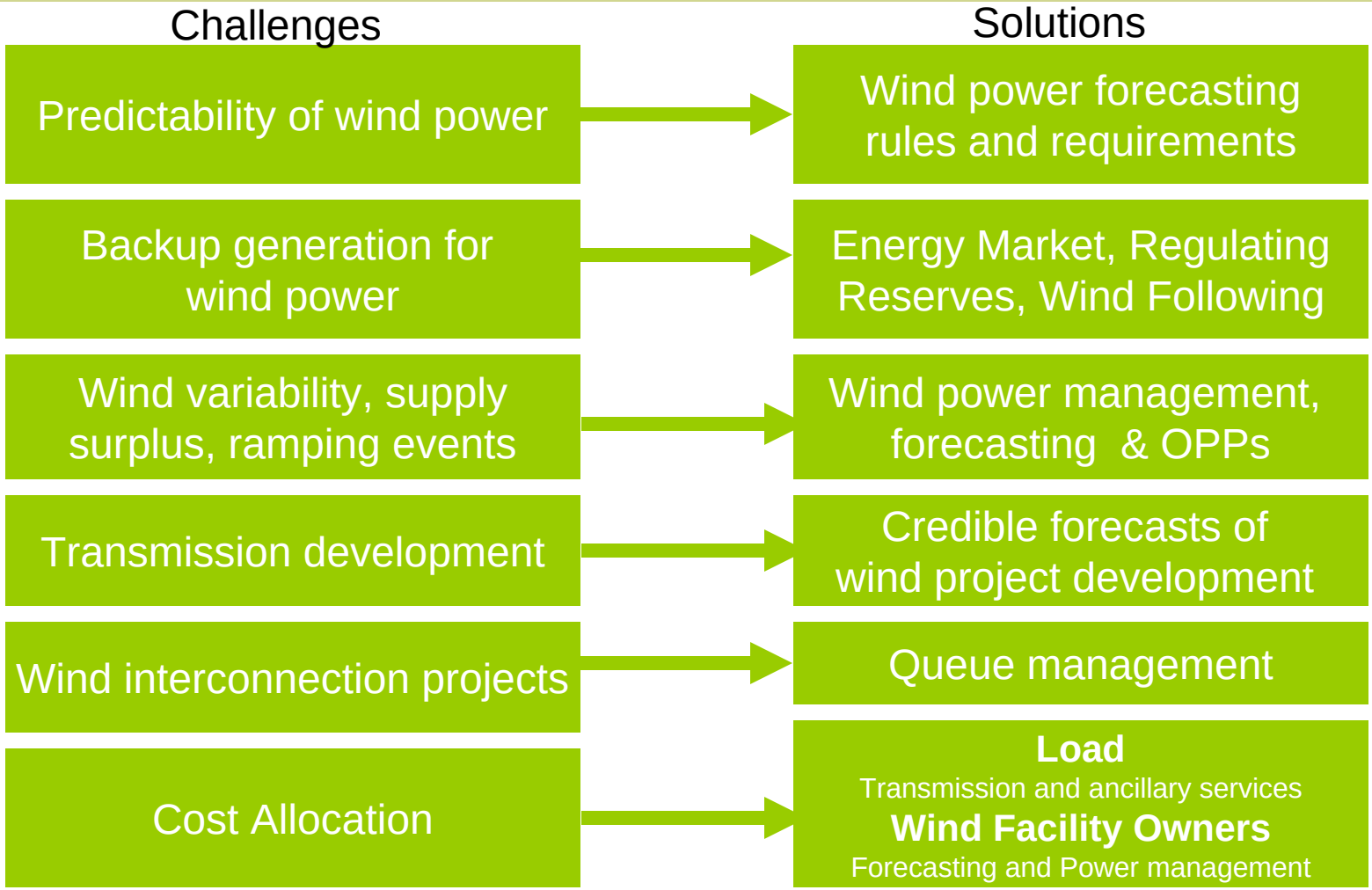
AESO Approach to Wind Integration



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CAISO Approach to Wind Integration

- New wind generators participate in CAISO PIRP program, with centralized day-ahead and hour-ahead forecasting service
- New market design is implemented
  - Hour-ahead load and wind generation energy forecasts provided no less than 120-minutes before beginning of next operating hour
  - Real Time five-minute load forecasts provided 7.5 minutes before beginning of five-minute dispatch interval
- Real Time telemetry from wind resources sent to CAISO on a four-second basis, similar to non-intermittent resources
- Technical requirements for new wind plants (LVRT & Power Factor)
- Pump storage considered a scheduled resource

Intra-hour load following is manageable - CAISO

- Load following is necessary to maintain stable operations.
- The CAISO's Real Time Market balances Load and Generation on a forward looking basis
- While some generators are dispatched upwards to meet their next hour schedules other generators may have to be moved downwards to maintain a generation load balance
- Real Time Economic Dispatch software runs every 5-minutes and dispatches generation based on economics and ramping capability
- Load following ramping requirements will increase and require more generation to be available for both upward (700-800 MW) and downward (600-1,000 MW) dispatch.

Additional regulation requirements are significant but manageable - CAISO

- Regulation is required for the CAISO to maintain scheduled frequency and maintain schedules on the interties
- Today, the CAISO can effectively operate the system by procuring ± 350 MW of regulation on an hourly basis
- By the 20% RPS built-out, regulation capacity requirements will increase by 170-250 MW for "up regulation" and 100-500 MW for "down regulation" depending on the season and time of day.

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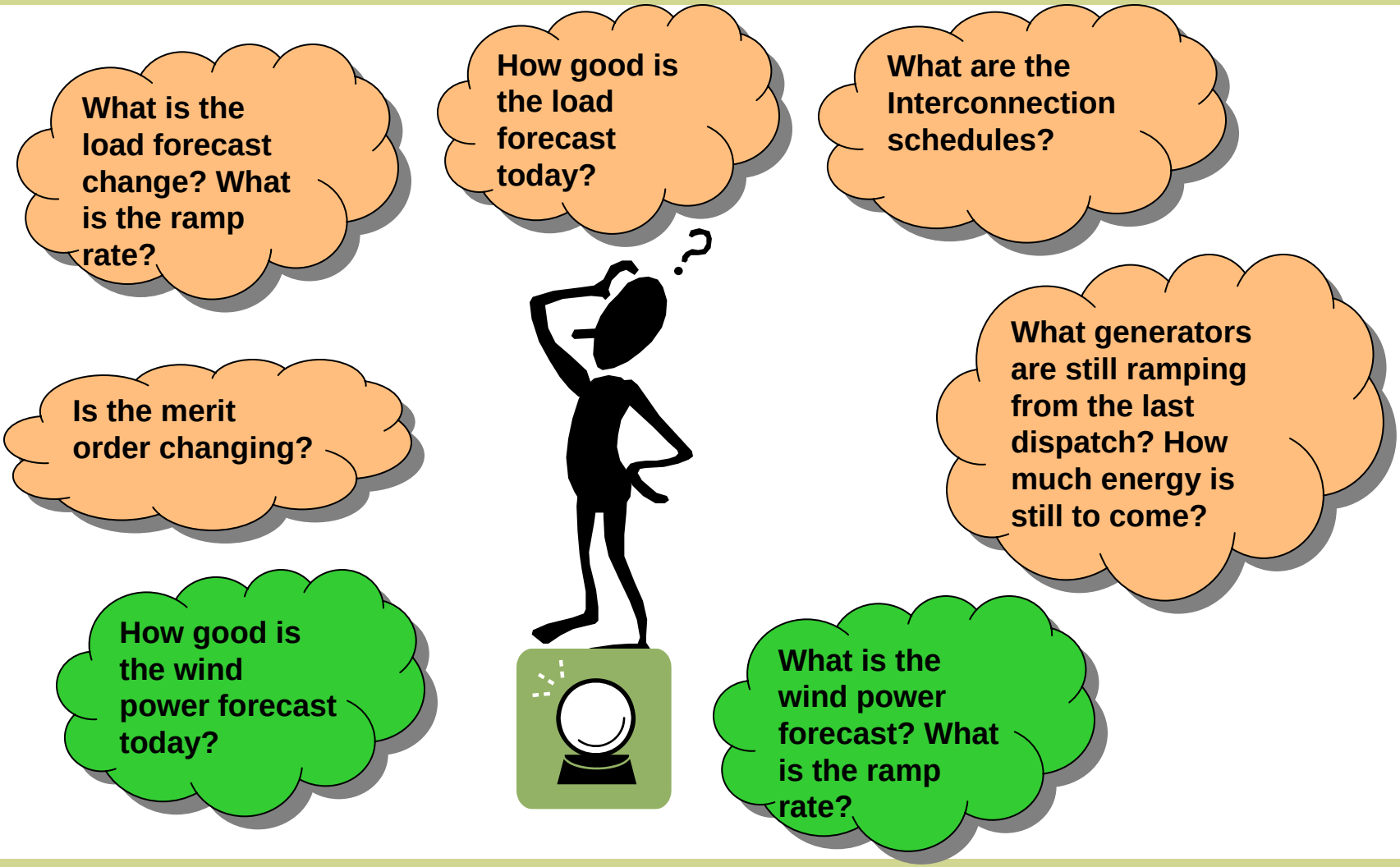
Operators Need Info - What is Changing?



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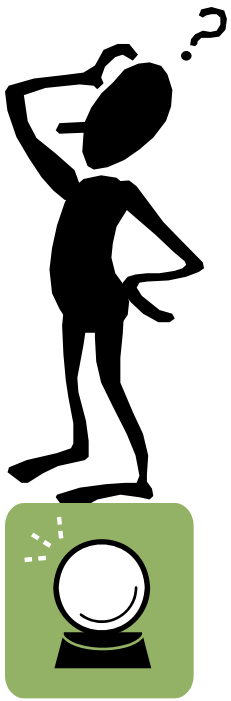
Operators Need to Tools to make supply-demand balancing decisions

What is the ramp rate capability in the merit order over the next 10, 20, 30 minutes?

What are the Regulating Reserve units doing?

How much capacity to dispatch to get the required ramp rate?

Do I need to dispatch more ancillary services?



Will I need to activate any WPM procedures?

Will I need to activate Supply Surplus / Shortfall procedures?

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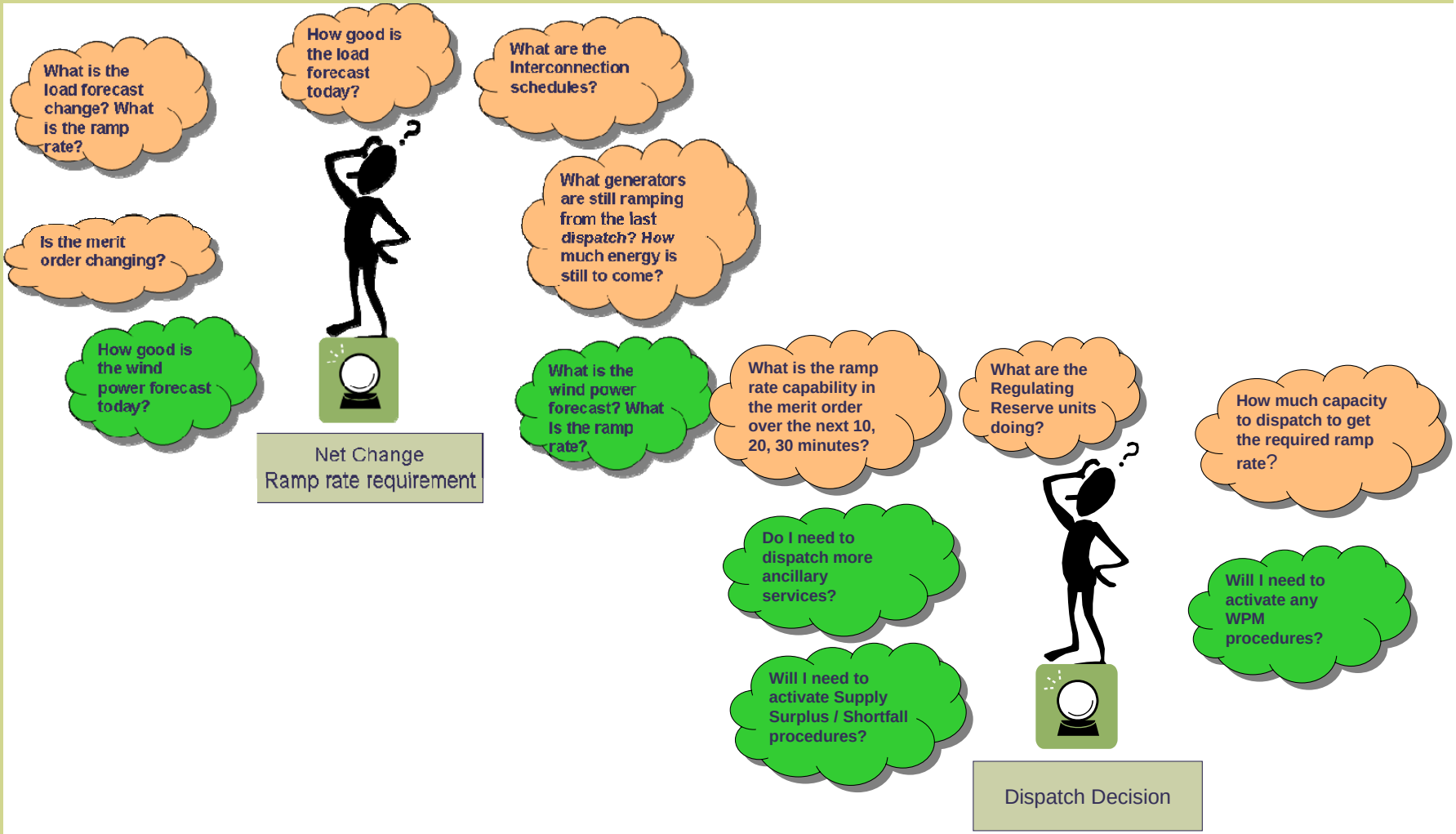
Repeat When Necessary



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Transmission system analysis accounts for existing and new wind installations.

The CEC predicts that about 4,600 MW of new wind generation to meet 20% RPS.

The CAISO study assumes the new generation is installed in the Solano and Tehachapi wind areas based on projects in the transmission queue and approved transmission upgrades.

The CAISO study accounts for about 2,600 MW of **existing** wind generation.

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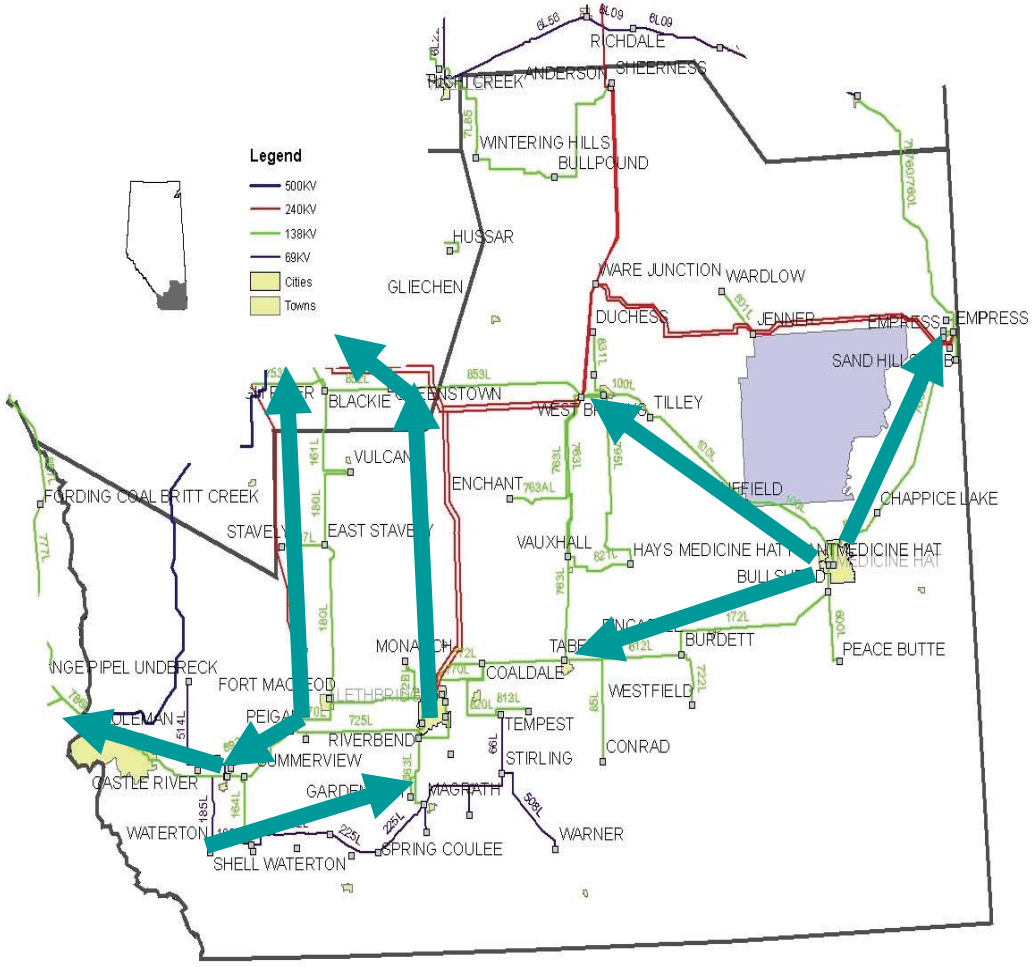
3,300 MW of wind ~ 750 $ M of Transmission in Alberta



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Storage Technology could facilitate renewables

- Pump Storage
  - 3rd pump at Helms will integrate large amounts of wind generation. Requires upgrade of infrastructure to Fresno area
  - Potential construction of Leaps Project
- Hydrogen Storage
  - Evaluate hydrogen storage – recommend visit to DOE sponsored hydrogen storage project in Colorado
- Compressed Air Storage
- Battery Storage
- High Speed Flywheel Storage
- Develop strategy for financing and implementing storage systems

4 types of Demand Response Programs

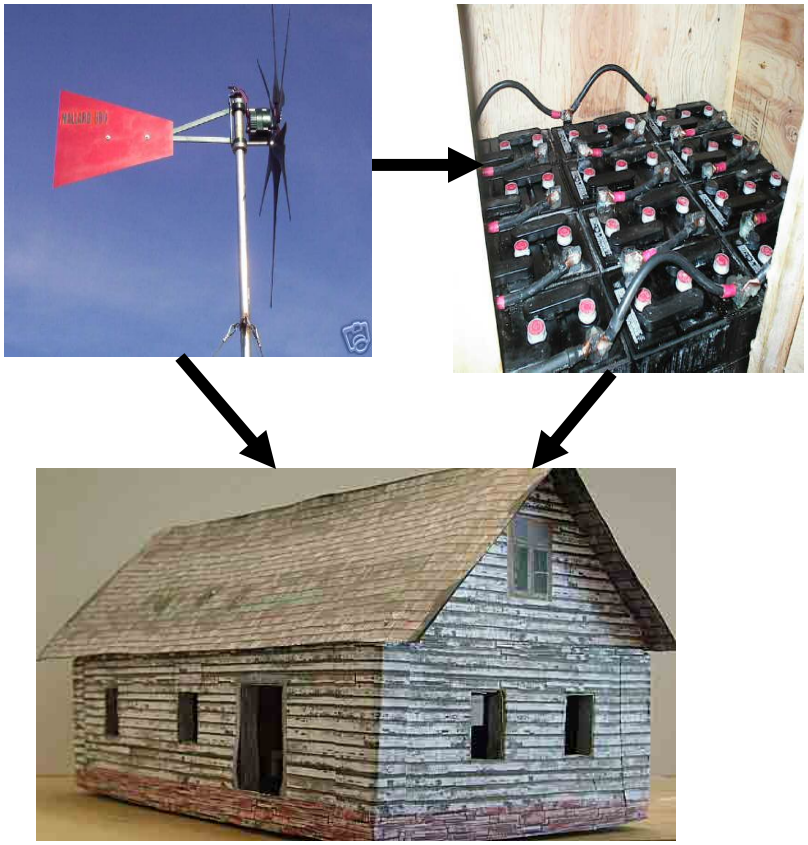
- Price Sensitive load that is willing to reduce demand for the right price. Demand that is bid into Day-Ahead markets to reduce peak load
- Interruptible Load – Loads that are willing to be interrupted or curtailed under emergency conditions – Stage 2 Emergencies – and will immediately take action in response to a dispatch notice.
- Frequency sensitive load – Load that is willing to turn off or reduce consumption due to a drop in system frequency. Example is Plug-In Hybrid Vehicles that will automatically stop charging their batteries when the frequency is low.
- Load that is willing to change based on availability of excess wind generation production

Summary

- Must understand the reliability and planning implications of Policy Initiatives, Legislation and Renewable Portfolio Standards
- Need sophisticated wind forecasting tools
- Need conventional generation – wind needs a dance partner
- Need wind power management
- Operators need to know what to do and have the resources, tools and operating procedures
- Need Major Transmission Upgrades
- WPF must meet technical requirements (SCADA, voice, LVRT, reactive power)
- Storage and Demand technologies/options can assist

Summary

- **We are learning as we go**
  - Need to share acquired knowledge
- **We need to educate**
  - The public, policy makers and many new players to the industry
- **We must simplify the messages**
  - Our dads/grandfathers remember windmills and back-up on the farm
- **We <u>must</u> maintain reliability**



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Agenda Item 8
MRC Meeting
May 6, 2008

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Integration of Variable Generation Task Force (IVGTF) Status Report

Warren Frost, Chair

to ensure the reliability of the bulk power system

IVGTF Scope

- The Task Force will prepare
  - A concepts document that includes the philosophical and technical considerations for integrating variable resources
  - Specific recommendations for practices and requirements, including reliability standards, that cover the planning, operations planning, and real-time operating timeframes.
- The document will include:
  - Planning timeframe issues, such as contribution to reserve margins and modeling requirements to test system reliability,
  - Operational Planning and Real-time operating timeframe issues, including Interconnection frequency, and primary and secondary generation control
  - Review NERC Standards for any gaps
  - Conclusions and recommendations.

IVGTF Status Report Guiding Principles

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- Bulk power system reliability must be maintained, regardless of the generation mix
- All generation must contribute to overall bulk power system reliability
- Standards and criteria established must be fair, transparent and performance-based
- Planners and operators must understand the challenges presented by large scale integration of variable generation
- Wind and other variable generation must effectively integrate into planning and operations practices to ensure reliability
- New Planning/operating tool requirements will be described in terms of bulk power system reliability performance

IVGTF Outline of White Paper

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- Characteristics of Variable Generation
- Planning and Technical Impacts
- System Operations
- Other and Future Considerations
- NERC Standard Review
- Conclusions & Recommendations
- Glossary

IVGTF Status

- High Industry Interest
  - 20 Nominations received
- Liaisons being built with Industry Groups
  - American Wind Energy Association (AWEA)
  - Canadian Wind Energy Association (CanWEA)
  - Utility Wind Integration Group (UWIG)
  - Solar Energy Industries Association (SEIA)
  - IEEE-PES
  - EPRI
  - U.S. Department of Energy
  - Union for the Co-ordination of Transmission of Electricity (UCTE)

IVGTF Management Strategies

- Nominate a responsible individual for each section
- Define requirements/form for each section
  - objectives
  - current approaches
  - degree of change required
  - issues
  - references, etc
- System of progress reporting to keep people on track

IVGTF Status: Work Plan

Item	Goal	Lead	2008 Milestones
Conf. Call	Review Report outline & assignments	Lauby	February
OC/PC	Status Report	Frost & Lauby	March
Meeting	Review assignments first drafts	Task Force	March
Meeting	Review Second drafts	Task Force	May
OC/PC	Status Report & preliminary findings	Frost & Lauby	June
Meeting	Review Final Draft Report	Lauby	August
OC/PC	• Present Final Draft Report • Capacity Method Recommendations	Frost & Lauby	September
Meeting	Review OC/PC Comments & develop Final Report	Task Force	August
OC/PC	Present Final Report and recommendations	Frost & Lauby	December
Meeting/ Workshop	Open Meeting to Present results	Task Force	January, 2009

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Questions?

to ensure the reliability of the bulk power system

Agenda Item 9
MRC Meeting
May 6, 2008

2008 Summer Assessment

MRC Action Required
None

Information
NERC will issue its 2008 summer Reliability Assessment on or about May 15.

The report will cover the four summer months (June–September) and identify any adequacy or reliability issues identified in the regions. This summer's report will reflect some improvements over what has been included in the past, including increased granularity in reporting on the status of available capacity resources, and greater attention to the impacts of demand response and wind capacity.

Based on a preliminary review of the input data and information, summer peak demand growth is projected to be modest. Also, there is an increase in the amount of projected demand response and capacity resources from wind generation compared to last summer's assessment.

With regard to the drought conditions in the SERC region, increased rainfall has improved the outlook substantially in recent months. However, the coming spring months will be the key in determining the impacts the drought will have on bulk power supplies this summer.

The schedule for review, approval, and publication is very tight. The regional self-assessments will be reviewed by the Reliability Assessment Subcommittee (RAS) on April 16–17, with requests to the regions for follow-up on some issues as necessary. An embargoed draft will be issued on April 23 for review by the RAS, Planning Committee (PC), Member Representatives Committee, and Regions, and for information to FERC, governmental authorities in Canada, and industry trade associations. The PC Executive Committee will review the final draft prior to submittal to the NERC board on April 30.

The board will consider the report for approval at its May 7, 2008 meeting. Following approval by the board, the report will be posted on the NERC website for public release.

2008 Long-Term Reliability Assessment

MRC Action Required
Discussion

a. Emerging Issues
The NERC Reliability Assessment Subcommittee (RAS), in conjunction with NERC's staff, developed seven emerging issues for emphasis in the 2008 Long-Term Reliability Assessment (LTRA). These were approved by the NERC Planning Committee (PC), which asked RAS to place particular emphasis in this year's report on the first two issues:

1. Greenhouse gas reductions
2. Fuel storage and transportation
3. Rising global demand for energy and equipment, increased off-shore manufacturing of raw and finished materials
4. Increased adoption of demand-side and distributed generation resources
5. Replacing and upgrading transmission infrastructure for the 21st century
6. Water usage
7. Mercury emissions

Input from the Member Representatives Committee (MRC) on these issues is welcomed.

b. Assessment Improvement Initiatives
NERC has launched several initiatives to improve its Reliability Assessment Program, led by Mark Lauby, NERC Manager of Reliability Assessments. The PC, which is the program support committee for this program, has established several new subgroups in support of these initiatives, as described below.

In addition, PC Chairman Scott Helyer recently addressed a letter to the MRC asking all industry sectors to help support these initiatives through the commitment of additional human resources.

Reliability Assessment Subcommittee
RAS, in conjunction with NERC staff, is responsible for developing the data and information collection requirements for regional self-assessments, conducting peer-review of these self-assessments, and preparing NERC's long-term and seasonal reliability assessment reports. RAS has also developed seven emerging issues for emphasis in the 2008 Long-Term Reliability Assessment (see Item a. above).

Reliability Assessment Improvement Task Force
RAITF is responsible for developing both a vision and a plan to improve NERC reliability assessments. Based on the task force's recommendations, the PC approved the following improvements for 2009–2011:

- Increased resource categorization
- Reliability Assessment Handbook for Regional Entities

- Study of emerging demand and capacity technologies
- Evaluate incorporation of more detailed analysis
- Risk-based emerging issue analysis and scenario selection

The final report outlining the vision and plan is expected by June 30, 2008.

Demand Response Data Task Force
Develops the data collection forms and database requirements for the demand response availability data system (DADS) that will be used to evaluate the performance of demand response programs, both as capacity and operating resources.

Integration of Variable Generation Task Force
Over 50 industry experts are developing a report that deals with ensuring the reliability of the bulk power system as variable resources are added to the system. The report and recommendations are expected in the third quarter of 2008.

Load Forecasting Working Group
Currently investigating advanced bandwidth analysis and weather normalization approaches to enable historical analysis of actual versus forecast demand.

Data Coordination Working Group
Designing the forms collect more granular resource data.

Additional activities to support reliability assessments are also being taken up by the Reliability Metrics Working Group, including the development of reliability metrics and leading reliability indcators.

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April 9, 2008

Steven G. Hickok
Chair, NERC Member Representatives Committee
Deputy Administrator
Bonneville Power Administration
905 NE 11th Avenue
Portland, Oregon 97232

Dear Mr. Hickok,

At the Member Representatives Committee's (MRC) February 11, 2008 meeting, I was gratified to hear support for the Planning Committee's (PC) ongoing effort to improve NERC's Seasonal and Long-Term Reliability Assessments. At that time I raised a key concern — the need for all industry stakeholders to allocate the human resources required to gather the data and information that will allow us to improve NERC's reliability assessments.

During its March 2008 meeting, the PC took a vital next step toward improving the NERC reliability assessments when it approved a 2008-2010 enhancement plan, which incorporates: 1) scenario analyses; 2) additional metrics to assess bulk power system reliability; 3) integration of new bulk power system resources (i.e. variable generation and demand response); and 4) collection of more granular data. These improvements provide a foundation from which all industry stakeholders can equitably discuss and document reliability issues, and together address industry needs to help ensure the future reliability of the bulk power system.

We expect the execution of the enhancement plan will require increased human resources. The NERC assessments will, as always, only be as good as the data and information we receive. We are concerned that understaffed assessment programs may not result in the high quality final product we all envision and expect. It is therefore essential that all levels of our organizations support this cause by making adequate human resources available.

Therefore, I request that the MRC reach out to the industry community, particularly by writing the NERC Regional Entities, EEI, APPA, NRECA, EPSA, CEA, and other electric industry trade associations, in support of the reliability assessment enhancement plan and ask them to encourage their members to provide the necessary human resources. Achieving our goal to improve NERC's reliability assessments requires collaborative support from the MRC and its industry constituents.

Thank you for your consideration of this matter.

Sincerely,

Scott M. Helyer

Scott M. Helyer, Chair
NERC Planning Committee

cc: NERC Board of Trustees
Planning Committee
Reliability Assessment Subcommittee
David Nevius

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Agenda Item 11
MRC Meeting
May 6, 2008

Follow Up to February 11 Discussion of NERC Priorities and Emphasis

MRC Action Required
Discussion

Attachments
Reliability Standards Development ─ Discussion Outline (Draft)
Compliance Monitoring and Enforcement ─ Discussion Outline (Draft)

Background
Steve Hickok, chairman of the MRC, will lead a discussion to follow up two of the five subject areas introduced in the February 11 MRC meeting, focusing in each area on the desired future state, the present gap (between the current state and the desired future one), and how NERC and its members would understand progress in getting from the current state to the future.

Discussion Outline (Draft 4/24/08)

Reliability Standards Development

Desired future state

1) Standards if met assure adequate level of reliability (ALR)
   a) Each standard plugs a hole in ALR
      i) A failure to meet the standard results in inadequate level of reliability
      ii) Magnitude of departure from the standard can be understood in terms of magnitude of the threat to reliability
2) Standard is cost-effective means to ALR
3) Standard sets out unambiguous requirements as clear obligations of a party to take and record specific actions
4) Technical soundness, administrative feasibility, enforceability, and operational consequences for other functions are thoroughly vetted before approval and imposition of standards

Current state

1) Too many standards
   a) Diverts focus, harms reliability
   b) Overlaps
   c) Low- and no-consequence requirements
   d) Results in many low-priority compliance issues getting in the way of high-priority operations
2) Poorly organized from standpoint of interdependencies
3) Ambiguity
   a) Multiple interpretations possible
4) Too many SARs in play at the same time
   a) Workload is preventing thorough review by industry prior to voting
5) FERC's demands are disrespecting (4), above
   a) Failure of standard to pass did not hinder its progression to FERC (recent VSL)
6) "Drive for perfect compliance with imperfect standards"
7) Is NERC enforcement role beginning to overwhelm its assistance roles?

Discussion Outline (Draft 4/24/08)

Compliance Monitoring and Enforcement

Desired future state

1) Culture of compliance
   a) Across all jurisdictions
   b) Participants …
      i) …accept importance of meeting reliability standards
      ii) …are aware of their responsibilities
      iii) …know performance is being monitored
      iv) …appreciate that consequences of failure are very serious
      v) …are acting to achieve compliance (low # of violations)
   c) Necessary attributes (shortcomings here are killers to a culture of compliance)
      i) Fairness
      ii) Consistency
      iii) Transparency
      iv) Timeliness

Current state

1) Post-June-18 violations
   a) Is the number high?
   b) Is this just the "watermelon" we swallowed?
2) Self reporting vs. caught by compliance audit
3) Problems that may jeopardize culture of compliance
   a) Fairness
      i) Appropriateness of remedies and penalties (Can jaywalking get the death penalty? Are industry responses recognizing importance of compliance?)
   b) Consistency
      i) Differing interpretations of requirements
      ii) Different compliance audit methods
      iii) Canadian vs. US enforcement?
      iv) Penalties application, use of mitigating and aggravating factors, etc.?
   c) Transparency
      i) Non-disclosure of penalty calculator
      ii) Non-use of interpretation process
      iii) Non-disclosure of investigations, violations, remedies (including "no action" outcomes), mitigation tracking
   d) Timeliness
      i) Postings lag
      ii) Prioritized dealing with issues is lacking
      iii) Overload of immature systems and shortage of qualified staff

4) Balance between promotion of compliance and enforcement of compliance

Agenda Item 12
MRC Meeting
May 6, 2008

Reliability Metrics and Leading Reliability Indicators

MRC Action Required
None

Background
Section 809 (Reliability Benchmarking) of NERC's Rules of Procedures requires NERC to identify and track key reliability indicators as a means of benchmarking reliability performance and measuring reliability improvements. This program includes assessing available metrics, developing guidelines for acceptable metrics, maintaining a performance metrics "dashboard" on the NERC Web site, and developing appropriate reliability performance benchmarks.

In order for NERC's programs to be successful, it is important to track their influence on the reliability of the bulk power system. By defining various metrics and indices, it is possible to use amassed historical data to track the success of various initiatives and develop leading indicators and root causes of unreliable system performance based on past events. Until now, the industry has lacked an organized way to establish and track these metrics and indices.

Program Progress
NERC staff has developed a Reliability Metrics white paper that describes a conceptual framework for establishing and tracking key reliability metrics and leading reliability indicators. This white paper also proposes a plan to establish an advanced system to measure reliability performance. The system will be used to:

- *Measure*:
  - Past and current reliability
  - Progress in ensuring reliability
  - Effectiveness of reliability standards and enforcement programs

- *Identify:*
  - Factors that positively or negatively impact reliability
  - Reliability problems and solutions

Although there are many components to reliability performance, the most meaningful metric of reliability improvement is a decline in the number of disturbance events.

In addition, NERC is proposing several metrics to measure each characteristic in the definition of Adequate Level of Reliability (ALR) and trend change patterns over operating and planning timeframes.

NERC is also concerned about the number of unreliable situations that lead, or could lead, to severe events. The objective of the metrics program is to identify and track the unreliable actions and at-risk conditions and use these as leading indicators of reliability performance. If great attention is not given to the observation of unreliable performance, sooner or later disturbance events will become more severe.

A good leading indicator measures how far reliability performance is from its goal and whether we are headed in the right direction. Choosing the right indicator is essential for effectively evaluating progress and should:

1. Be relevant to the goal;
2. Be easily understood;
3. Be easily measured with regularly collected information; and
4. Provide meaningful information.

NERC proposes the following leading indictors to evaluate performance improvement progress.

1. Vegetation management
2. System Operating Limit (SOL)/Interconnection Reliability Operating Limit (IROL) near misses and violations
3. Transmission Loading Relief (TLR) Level 5 and higher
4. System frequency deviation
5. Loss of bulk power transmission components beyond recognized criteria, i.e., single phase line-to-ground fault with delayed clearing
6. Number of minutes of an inter-area oscillation for a given period
7. Relay misoperations
8. Energy Emergency Alert (EEA) levels and duration
9. Lost MW demand due to disturbance events
10. Average restoration time following an event
11. Capacity margin (1 – 10 years)
12. Demand assessment (1-10 years)

Next Steps

The Reliability Metrics Working Group (RMWG) has started to review and comment on NERC's Reliability Metrics white paper, including definitions of reliability metrics and leading reliability indicators. The group is also developing metrics for future system reliability trends in support of NERC's long-term reliability assessments.

The next steps will be to:

1. Vet the white paper's concepts and incorporate comments received from stakeholders;
2. Develop general metrics of ALR;
3. Define the measures, including formula or methodology for calculation;
4. Identify data collection and reporting guidelines; and
5. Recommend a metrics implementation plan.

Agenda Item 13
MRC Meeting
May 6, 2008

Event Analysis and Information Exchange

MRC Action Requested
Discussion

Information
NERC's Event Analysis and Information Exchange program, headed by Bob Cummings, Director, continues to work with the regions in analyzing blackouts, disturbances, off-normal events, and system performance and sharing the results of these analyses to help improve bulk power system reliability. The latest version of the NERC Events Tracking System report, as of April 15, 2008 is attached. Nineteen event analyses have been closed out since the inception of the program. These have been omitted from the report for brevity.

A number of the analyses are in the final review stages. Lessons learned from these analyses are being documented for the NERC "Alert" system and trends are being recorded for metrics and benchmarking.

Bob Cummings will highlight some of the lessons learned and trends from the analyses completed so far.

Analysis of Specific Events

Eastern Interconnection Disturbance — August 4, 2007

- Multiple Faults on Jefferson — Greentown 765 kV
- 4,261 MW generation lost
  - Rockport 1 & 2 – 2,600 MW rating
  - Newton 1 & 2 – 1,126 MW rating
  - Petersburg 4 – 545 MW rating
- Frequency dropped from ~60 to 59.864 Hz
- Full frequency recovery in 6 minutes
- Modeling and analysis work ongoing
- Report near completion

MRO Disturbance — Sept. 18, 2007

- North Dakota, Minnesota, Manitoba, & Saskatchewan separated from the Eastern Interconnection
- Saskatchewan then separated from Manitoba and North Dakota
- SaskPower loss ~900 MW of load and generation
- MISO reconnected 1st island in about 10 minutes
- SaskPower reconnected after 58 minutes
- Completing Operations Analysis and Sequence of Events

- Modeling and other analyses ongoing
- Interim report completed March 26, 2008
- Final report expected in July-August

WECC PacifiCorp East Disturbance — February 14, 2008

- Multi-phase fault with delayed clearing
  - Failed lockout relay
- Loss of 8 generating units at 3 plants – 2,803
  - Loss of wind farm – 105 MW (included above)
- Loss of 4 – 345 kV transmission lines
- Frequency declined to 59.76 Hz – 24 minutes to recover
- Energy Emergency Alerts Declared
  - 274 MW interruptible load shed
  - 200 MW firm load shed
- Paths 20, TOT-1A, TOT-2C, and Bonanza West exceeded their limits for 14 minutes
- WECC performing detailed event analysis

FRCC Southern Florida Disturbance — February 26, 2008

- Initial 1-phase fault led to 3-phase fault with delayed clearing 138 kV system
- Fault was cleared by remote protection settings
  - Local protection disabled during troubleshooting
  - 25 Transmission lines tripped – remote clearing
- ~ 2,300 MW load shed clearing the fault
- Delayed clearing resulted in low voltages
  - Caused two nuclear units to trip (as designed)
- Generation loss – 2,500 MW in electrical vicinity of fault
- Additional generation loss ~ 1,500 MW within the Region
- ~ 2,200 MW UFLS - across 11 LSEs (59.82 Hz & Step A)
- Northern systems did not get into UFLS
- FRCC performing detailed analysis

Emerging and On-Going Trends

NERC has identified the following emerging and on-going trends from all the events that have been reported. The number in parentheses indicates the number of events in which each issue was identified as either a causal or contributing factor.

- Protection system miscoordination (7)
- Protection system misoperation (6)
- Near-term load forecasting error (6)
- Generator turbine control miscoordination (4)

- Human Error (4)
- Generation vs transmission protection miscoordination (3)
- Inter-area oscillations (3)
- Loss of station observability (SCADA) (3)
- Protection Equipment Failure (3)
- Relay loadability (3) – 1 of these was in Europe
- Relay settings (drifting) (3)
- Relays / controls out-of-date with manufacturers' tech. bulletins (3)
- Transmission Equipment Failure (3)
- Uncoordinated load restoration (3)
- Wiring errors (3)
- Failed or run-away operation of substation automation (2)
- Gas supply / gen. dispatch coordination (2)
- Handling of missing/bad data by EMS systems (2)
- Line hardware / conductor failures (2)
- Voltage sensitivity of generation auxiliary power systems (2)
- System Integrity Protection Scheme Misoperations (SPS & RAS) (2)
- Protection system design errors / misapplications (2)
- Lack of Redundancy (1)
- SCADA system misoperation (1)

Events Tracking System

As of — April 15, 2008

Events Under Analysis or Review

Event ID	Region	ISO/RTO/Company	Description	Event Class	NERC Lead	Status
2008-04-11	WECC	CFE	During relay testing, technician accidently tripped the Tijuana – Miguel 230 kV line at the Tijuana end only, separating CFE from the rest of the Western Interconnection. The La Rosita – Imperial Valley 230 kV line was already opened for maintenance.	2	Bob Cummings	Reviewing report
2008-03-15	SERC	Southern Company	Severe weather caused multiple transmission line outages in Georgia. Savannah area load lost due to resulting system collapse.	3	Bob Cummings	Southern Company to prepare Abbreviated Report for SERC and NERC review
2008-02-26-1	ERCOT	ERCOT	Sudden calm resulted in loss of most wind generation in ERCOT. ERCOT became generation deficient and shed interruptible load under EEA-2.	A2	Mark Lauby	Referred to Future Adequacy group in NERC RAPA
2008-02-26	FRCC	FRCC / FPL	Faulted FPL circuit switcher with delayed clearing resulted in loss of 4,500 MW of load, and about 3,000 MW of generation.	4	Bob Cummings	FRCC initiated detailed event analysis team. NERC participating.
2008-02-15	WECC	PG&E	Contra Costa Substation Islanding event occurred during of the commissioning of Pittsburg CB 332 on the Pittsburg-Columbia Steel 115 kV line. Part of 60 kV system islanded.	2	Bob Cummings	Reviewing reports

Events Under Analysis or Review

Event ID	Region	ISO/RTO/Company	Description	Event Class	NERC Lead	Status
2008-02-14	WECC	PacifiCorp East	Breaker failure with delayed clearing caused loss of 2,818 MW of generation. 200 MW firm load and 274 MW interruptible load shed.	3	Bob Cummings	WECC detailed report requested. NERC participating on EA team.
2008-01-31	NPCC	ISO New England and New Brunswick	New Brunswick and New England separated during 345 kV series capacitor switching at Orrington. Over 600 MW of generation tripped.	2	Bob Cummings	NPCC Task Force on System Protection reviewing, NERC to review the report
2008-01-26	WECC	BPA & PNSC	Bid Eddy 500/230 kV transformer failure caused oscillations in WECC and resulted in the Pacific DC Interconnection (PDCI) being removed from service.	2	Bob Cummings	Referred to WECC Disturbance Monitoring Working Group and Model Validation Working Group. Possible abbreviated OPS report.

Events Under Analysis or Review

Event ID	Region	ISO/RTO/Company	Description	Event Class	NERC Lead	Status
2007-12-12-1	WECC	SRP	Breaker Failure at Palo Verde tripped the 500 kV East Bus. This caused multiple 500 kV lines to trip and 306 MW of generation at Harquahala and Arlington Valley.	2	Bob Cummings	Referred to WECC System Protection Working Group for protection operation review. NERC will Review.
2007-12-12	ERCOT	Texas Genco II, LLP Tenaska or Exelon	Loss of Limestone #2, and Frontier GT #2, and ST #4, totaling 1,022 MW. This was a potential NERC Disturbance Control Standard event. ERCOT frequency fell to 59.79 Hz, but recovered in 10 minutes.	2	Bob Cummings	Examining Generation Trip Modes
2007-12-11	SPP	Westar	During icy conditions, a static wire fell into the 345 kV switchyard at Jeffrey's Energy Center, causing the tripping of the 345 kV and 230 busses and all 3 generating units (2,077 MW).	3	Bob Cummings	Referred to SPP System Protection Working Group for protection operation review. NERC EA reviewing Westar report. Additional clarification will be requested.
2007-12-01	WECC	PacifiCorp East	Multiple 345 kV and a 230 kV line tripped during a winter storm, causing overloads on Path 32.	2	Bob Cummings	Reviewing report to WECC OPS

Events Under Analysis or Review

Event ID	Region	ISO/RTO/Company	Description	Event Class	NERC Lead	Status
2007-11-27&30	WECC	PacifiCorp East	Multiple line trips due to insulator contamination.	2	Bob Cummings	Oral presentation made at the January 2008 OPS meeting. A follow-up abbreviated disturbance report will be presented at the May 2008 OPS meeting.
2007-10-18	WECC	PacifiCorp East	Trip of about 1,554 MW generation at Jim Bridger	2	Bob Cummings	In Progress – reviewing for generation tripping mode
2007-09-18	MRO	OTP, NSP, GRE, ALTW, MP, and Sask Power	System Separation — Tripping of multiple 345 kV lines, others tripped on overload/voltage/out-of-step conditions. Northwestern MRO separated from Eastern Interconnection and Saskatchewan formed a second separate island.	4	Bob Cummings	In Progress – Interim report due out at end of March, final report in last summer.
2007-09-15	NPCC	Hydro Québec TransÉnergie	Potential transformer fire on a Chateauguay bus and loss of generation/transfer capability	2	Bob Cummings	Reviewing Implications to operations
2007-08-29	WECC	Turlock Irrigation District	Tree contact and loss of load	3	Bob Cummings	In progress
2007-08-18	WECC	APS and Nevada Power	Crystal – Navajo 500 kV line trip during switching of the Moenkopi – Eldorado 500 kV line	2	Bob Cummings	Reviewing Findings – outstanding relay loadability question

Events Under Analysis or Review

Event ID	Region	ISO/RTO/Company	Description	Event Class	NERC Lead	Status
2007-08-04	RFC/SERC	AEP/Ameren/IP&L	EI Frequency Disturbance – Loss of 4,200 MW of generation following tripping of 765 kV line	3	Bob Cummings	In progress – Interim report nearing completion
2007-08-04	WECC	Alberta	Alberta islanding	2	Bob Cummings	In progress
2007-06-21	NERC	NERC	ES-ISAC Advisory Cyber Vulnerability		Stan Johnson	In progress
2007-06-12	NPCC	IESO	5% Voltage Reduction	A2	Bob Cummings	In progress
2007-06-07	WECC	BPA	Human error caused 220 Tripping & local RAS failed	2	Bob Cummings	In progress
2007-06-05	WECC	Idaho Power	240 MW Load Shed	3	Bob Cummings	Report due to WECC OPS
2007-05-23	SERC	SERC	Phone System Hacked		Stan Johnson	In progress
2007-05-23	WECC	BPA	Transformer fault & Reclose	2	Bob Cummings	In progress
2007-05-15	FRCC	Progress - Florida	Rocks in combustion turbine		Stan Johnson	In progress
2007-02-24	ERCOT	ERCOT	Emergency Electric Curtailment Plan implementation	2	Bob Cummings	In progress

Frequency Events Under Analysis (EA & RS)

Event ID	Region	ISO/RTO/Company	Description	Event Class	NERC Lead	Status
2008-02-03	NERC	Eastern, Western, and Texas Interconnections	Frequency disturbance including oscillations	1	Bob Cummings	To be pursued by NERC Staff and the Resources Subcommittee
2007-10-18	EI	Eastern Interconnection	Low FTL Event	1	RS — Tom Vandervort	In Progress
2007-03-12	NERC	Eastern Interconnection	DST frequency event	1	RS – Tom Vandervort	In progress

In Final Review by NERC Event Analysis Group

Event ID	Region	ISO/RTO/Company	Description	Event Class	NERC Lead	Status
2007-10-26	WECC	SCE and Riverside	Interruption of the City of Riverside's (RVSD) entire 66 kV system, due to loss of all seven 66 kV source lines, and five substations on the Southern California Edison Company's (SCE) subtransmission system, as a result of multiple 66 kV and 115 kV subtransmission lines relaying at approximately 0644 hours PDT on October 26, 2007.	3	Bob Cummings	In Final Review
2007-10-15	WECC	PacifiCorp East	Three 138 kV lines tripped following the tripping of the Ben Lomond – Borah 345-kV line for a permanent fault. Interruptible loads and generation curtailed to relieve loadings	2	Bob Cummings	In Final Review
2007-07-15	SERC	TVA	Three phase lightning arrestor failure on 161/23 kV transformer caused voltage drop – 950 MW load lost, only 285 MW off after 15 min.	3	Bob Cummings	In Final Review
2007-07-06	WECC	Idaho Power Company	Midpoint Substation Disturbance	3	Bob Cummings	Final Review of IPCO presentation to WECC OPS
2007-06-29-2	WECC	BCTC	Ashton Creek — Multiple line trips – Lightning	3	Bob Cummings	In Final Review
2007-04-10&11	WECC	North Western Energy Montana	Colstrip — multi-unit trips (two times)	3	Bob Cummings	In Final Review
2006-12-22	ERCOT	TXU / Tenaska	Generation trips in eastern Texas	2-3	Bob Cummings	In Final Review
2006-10-03	ERCOT	ERCOT	Gibbons Creek Outage	3	Bob Cummings	In Final Review

In Final Review by NERC Event Analysis Group

Event ID	Region	ISO/RTO/Company	Description	Event Class	NERC Lead	Status
2006-04-17	ERCOT	ERCOT	Unseasonable temperatures cause missed forecast. Inadequate committed generation, coupled with loss of 2,400 MW of generation resulted in ERCOT initiating Emergency Electric Curtailment Plan (EECP) Steps 1 and 2, shedding interruptibles and about 1,000 MW of firm load in rolling blackouts.	2, A3	Bob Cummings	In Final Review – additional questions raised

Analyses On Hold

Event ID	Region	ISO/RTO/Company	Description	Event Class	NERC Lead	Status
2007-10-14	WECC	North Western Energy Montana	Colstrip unit (780 MW) tripped following possible inter-area oscillations	1	Bob Cummings	Pending Event Analysis resource availability
2007-02-06	WECC	WECC	Inter-area oscillations & resource adequacy	1 & A2	Bob Cummings	Pending Event Analysis resource availability
2006-07-24	WECC	WECC	Inter-area oscillations	1	Bob Cummings	Pending Event Analysis resource availability

Event Classifications

Events are broken into two general classifications: Operating Security Events and Resource Adequacy Events

Operating Security Events

Operating security events are those that significantly affect the integrity of interconnected system operations. They are divided into 5 categories to take into account their different system impact.

Category 1 An event results in any or combination of the following actions:

a. the loss of a bulk power transmission component beyond recognized criteria, i.e. single-phase line-to-ground fault with delayed clearing, line tripping due to growing trees, etc.
b. frequency below the Low Frequency Trigger Limit (FTL) more than 5 minutes.
c. frequency above the High FTL more than 5 minutes.
d. rolling frequency hourly average for last 60 minutes more than 0.03 Hz.
e. inter-area oscillations

Category 2: An event results in any or combination of the following actions:

a. the loss of multiple bulk power transmission components
b. system separation with no loss of load or generation
c. SPS or RAS misoperation
d. the loss of generation (between 1,000 and 2,000 MW in the Eastern Interconnection or Western Interconnection and between 500 MW and 1,000 MW in the ERCOT Interconnection).
e. the loss of an entire generation station or 5 or more generators
f. the loss of an entire switching station (all lines, 100 kV or above)
g. loss of dc converter station

Category 3: An event results in any or combination of the following actions:

a. the loss of generation (2,000 MW or more in the Eastern Interconnection or Western Interconnection and 1,000 MW or more in the ERCOT Interconnection).
b. the loss of load (less than 1,000 MW)
c. UFLS or UVLS operation.

Category 4: An event results in any or combination of the following actions:

a. the occurrence of an interconnected system separation or islanding
b. the loss of load (1,000 to 9,999 MW)

Category 5: An event results in any or combination of the following actions:

a. the occurrence of a blackout
b. the loss of load (10,000 MW or more)

Resource Adequacy Events

Adequacy events are divided into three categories based on Standard EOP-002-0 (Capacity and Energy Emergencies).

Category A1: No disturbance events and all available resources in use.

a. Required Operating Reserves can not be sustained.
b. Non-firm wholesale energy sales have been curtailed.

Category A2: Load management procedures in effect.

a. Public appeals to reduce demand.
b. Voltage reduction.
c. Interruption of non-firm end per contracts.
d. Demand-side management.
e. Utility load conservation measures.

Category A3: Firm load interruption imminent or in progress.

Board of Trustees Nominating Committee Process

MRC Action Required
None

Information
The Board of Trustees Nominating Committee submitted its Report to the Member Representatives Committee at its February meeting, and the MRC elected one new and three returning trustees. The MRC had five representatives on the Nominating Committee.

After the Nominating Committee completed its work, committee members filled out self-assessment forms, as is the practice for all NERC board committees. The MRC representatives had these observations:

> "While I understand the need for a smaller group to interview the finalists, I felt I wasn't as fully involved as I should have been. In the future, perhaps a smaller group of 3 trustees and 3 MRC would have been a better sized committee and all could have been involved in the entire process. Otherwise, I do feel the committee came up with very good candidates and a good finalist."
>
> "The process worked well. Having a balance of MRC and Trustees on the committee is important. Using an outside search firm was very important."
>
> "In order to achieve our objective of sustaining the right mix of attributes (knowledge, skills, abilities, experience, diversity, etc.) at the Board, we need to take a longer view and develop taps for drawing from pools of the attributes that are going to be most important to us. Before the current NC disbands, perhaps they should discuss how we might set up a more strategic and durable approach, rather than just continuing to focus each year on what we're losing and therefore want to replace at that moment."
>
> "It would be helpful if there was a way for the nomination process to take a longer term view as we face the situation of a number of trustees reaching the 12-year mark. If we know a year early that an incumbent trustee cannot be re-nominated, it would be useful if a nomination for a year in the future could take place (understanding this is difficult because of getting commitments in advance).
>
> "Although not a nomination committee process issue, new trustees need assurance of election before resigning positions. It may be necessary to change the by-laws to allow for resignations of certain conflicting positions *after* election. Similarly, rather than requiring divesting of stock, etc. *prior* to election, it may be helpful to allow a short interval *after* election to accomplish such divestiture."
>
> "Unfortunately, I was not able to participate at the last Nominating Committee even if I did support those who were appointed by the committee."

MRC members may wish to discuss these matters. As background for the discussion, this item also includes the makeup of the 2007 Nominating Committee and an excerpt from Article III, Section 5, of the NERC Bylaws dealing with the composition and duties of the Nominating Committee.

Members of 2007 Nominating Committee

The 2007 Nominating Committee included independent trustees Tom Berry (chairman), John Anderson, Sharon Nelson, Ken Peterson, Bruce Scherr, and NERC Chairman Richard Drouin (*ex officio*), as well as Michael Core (Big Rivers Electric), William Gallagher (Transmission Access Policy Study Group), Steve Hickok (MRC Vice Chair), Steve Naumann (Exelon), and Jean-Paul Theorêt (Québec Régie de l'énergie), representing the Member Representatives Committee.

Excerpt from NERC Bylaws, Article III, Board of Trustees

* * * * *

Section 5 — Nominating Committee — The board shall appoint, on an annual basis, or more frequently if needed in the event of a special election pursuant to Article III, Section 4, a nominating committee (the "nominating committee") to recommend candidates (i) to succeed the independent trustees whose terms expire during the current year and (ii) to serve the remainder of the term of any independent trustee who ceased to serve as a trustee subsequent to the last annual election of trustees. The nominating committee shall consist of those independent trustees whose terms do not expire during the current year and such number of other persons with such qualifications as the board shall specify, provided, that the nominating committee shall be chaired by an independent trustee whose term does not expire during the current year and shall include at least three persons who are also members of the Member Representatives Committee, and provided further, that the nominating committee formed for the purpose of recommending candidates to stand for election as trustees at the election to be held on or about February 1, 2007, pursuant to Article III, Section 6 shall not include any members of the Member Representatives Committee but shall include three persons each of whom at the time of his or her appointment by the chair of the Stakeholders Committee of the North American Electric Reliability Council to the nominating committee shall be a member of that Stakeholders Committee. The board shall establish, by resolution, the procedures to be followed by the nominating committee in identifying and recommending candidates to serve as independent trustees; provided, however, that such procedures shall include a means of permitting members of the Corporation to recommend to the nominating committee candidates for consideration as nominees for independent trustees. The nominating committee shall nominate candidates for election to the board consistent with the requirements of Article III, Section 2 for board composition by country participation, and shall also endeavor to nominate candidates for election to the board consistent with the objectives that the board as an entirety reflects expertise in the areas of technical electric operations and reliability, legal, market, financial, and regulatory matters, and familiarity with regional system operation issues; and reflects geographic diversity.

* * * * *

Training, Education, and Personnel Certification

MRC Action Required
None

Training and Education Program
The Training and Education program develops and maintains appropriate training and education activities for NERC staff, regional entity staff, industry participants and regulators affected by new or changed reliability standards or compliance requirements.

Compliance Auditor Training
NERC is delivering a training program for compliance auditors on interview techniques, correct protocols, processes, investigation techniques, and other necessary skills. An initial fundamentals course has been developed and is delivered to team leaders quarterly. An initial fundamentals course for industry volunteers who participate on compliance audits has also been developed. A complete program with continuing learning activities will be developed during the next five years to equip NERC compliance auditors with the necessary skills to effectively perform audits.

Audience	Deliverables	Schedule	Status
NERC compliance staff, regional entity compliance staff, contractors, and industry volunteers.	One fundamentals course for industry volunteers.	Volunteer e-learning training program was launched on October 31, 2007.	Volunteer course modules currently have over 317 users registered to take the course.
	One advanced skills Evidence Gathering e-learning module for audit team leaders and audit team members.	Deliver course by April 30.	Under development and on-schedule.
	One e-learning course on how to develop compliance elements for reliability standards (partnering with standards group) for compliance element development resource pool volunteers.	Deliver course by July 31.	Under development.
	One e-learning course on CMEP Timelines and Time Management for audit team leaders and audit team members.	Deliver course by September 30.	Under development.
	One Compliance Violation Investigation course (platform TBD)	Deliver course by Dec. 31.	Under development.

	One instructor-led IT Auditing course for CIP Standards for audit team leaders. One advanced Audit Report Writing e-learning course to be offered to audit team leaders.	2 courses to be offered in 2008, in November and December to approximately 40 participants. Deliver course by Dec. 31.	Under development.

Readiness Evaluator Training

NERC developed a training program for readiness evaluators on the evaluation process, interview techniques, observation techniques, and other necessary skills. An initial fundamentals course for industry volunteers was released first.

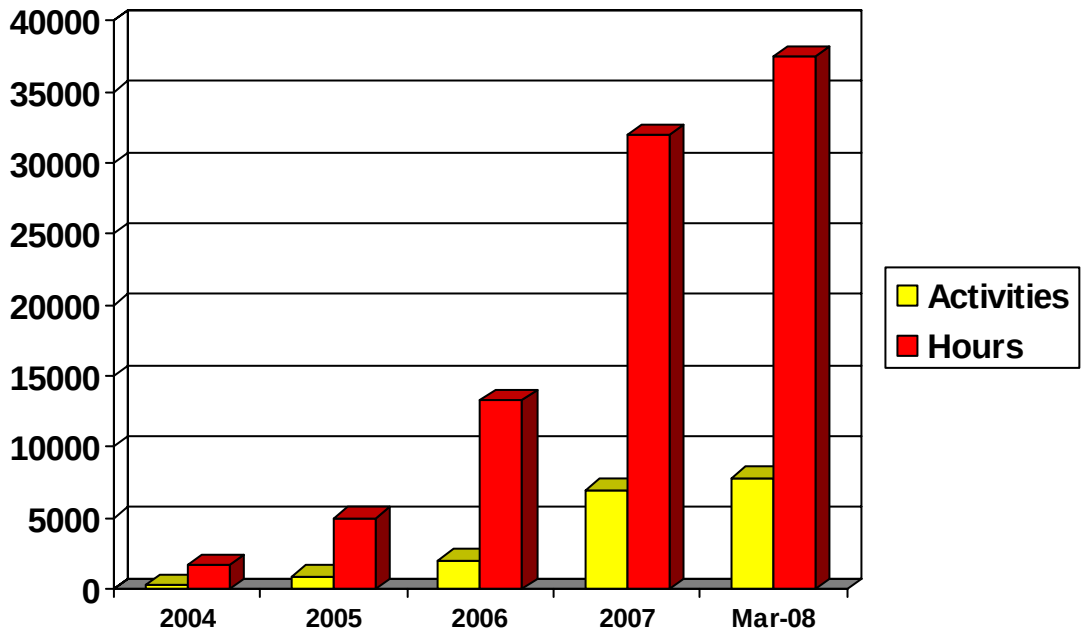
Audience	Deliverables	Schedule	Status
NERC readiness evaluator staff, regional entity readiness evaluation staff, contractors, and approximately 300 industry volunteers.	One internet-based course for industry volunteers.	Industry volunteer e-learning was launched on December 21, 2007.	169 industry volunteers have registered for the readiness evaluator e-learning course.

Continuing Education Program

Since the Continuing Education (CE) Program started, the number of providers has increased from 48 offering 294 approved learning activities and 1,634 CE hours of instruction, to 183 now offering over 7,800 approved learning activities and over 37,500 CE hours of instruction to system operators. Much of the growth in 2006 and 2007 is attributed to NERC's 2006 approval to use CE hours to maintain a certification credential. We will continue to see growth in the number of courses and CE hours of instruction as system operators transition into three-year credentials.

Since April 1, 2006, 4,426 system operators have earned CE hours. Over 435,000 CE hours have been awarded to these system operators. Approximately 152,000 hours were awarded in 2006, and over 280,000 hours were awarded in 2007. Since January 1, 2008, system operators have earned 59,000 CE hours.

We anticipate continued growth of the CE program as increasing numbers of NERC-certified system operators use CE hours to maintain their credentials.



System Operator Certification Program
Since 1998 NERC has maintained a System Operator Certification Program that establishes minimum standards of competency for system operators with four specialized certifications. The Personnel Certification Governance Committee (PCGC) is responsible for maintaining the integrity and independence of the certification process and credential.

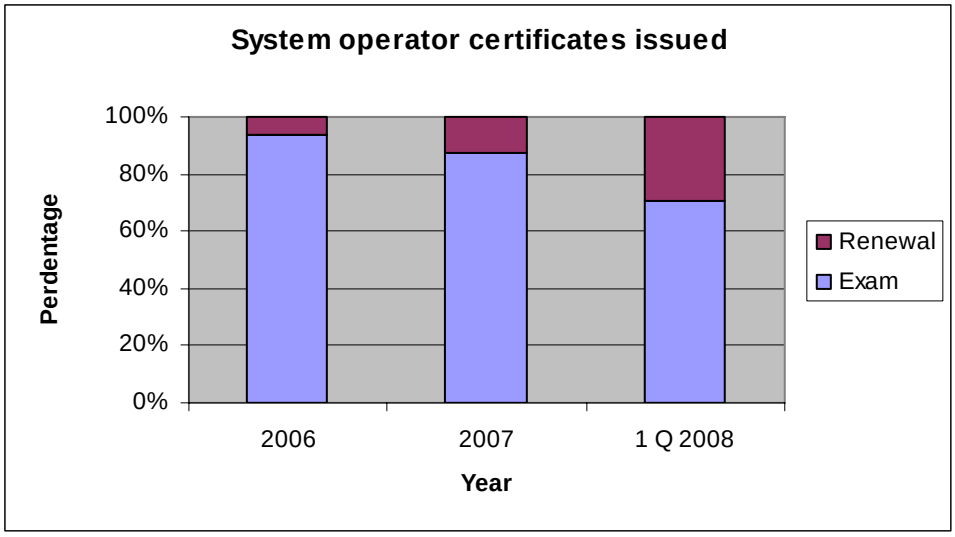
A system operator is awarded certification upon passing an examination that is based on a job analysis of their area of responsibility. The exam focuses on the knowledge and application of the NERC reliability standards and basic principles of interconnected bulk power system operation. A certification credential is maintained by earning continuing education hours through approved learning activities.

Certification and Continuing Education Database
This database tracks certified system operators from their initial application, through certification examinations, to subsequent submissions of continuing education hours to maintain their credential. It provides a platform through which CE providers can manage the individual learning activities they offer. The database is currently in the fifth change order to upgrade its functionality since it was implemented in June 2007.

System Operator Certification Examinations
Development of new exams is on schedule as they are set to be published in July 2008. No exams will be delivered in June to facilitate the changeover to the new exams.

This summer the PCGC will begin the process of creating a survey instrument that will be used in 2009 to conduct a job analysis. The results of this analysis will form the basis for new exams due in 2010.

In the first quarter of 2008, 280 system operator certifications were issued. Since expanding the certification program to include maintaining a credential through continuing education hours, a total of 250 credentials have been maintained (renewed) with 82 of those in the first quarter of 2008. As the dark area of the chart below indicates, the use of continuing education to maintain a credential has increased since its introduction in October 2006.



Report from the Personnel Certification Governance Committee (PCGC)

Advanced Certification

The PCGC is currently researching the feasibility of offering a voluntary advanced system operator certification. This certification ideally would require a demonstration of more competencies than the current credential and include job experience as a factor. Factors affecting the decision include the available population, interest in attaining the credential, costs for developing and administering the credential, and how the credential will be viewed by the industry and regulators. If the decision is made to move forward with the credential, the earliest it could be delivered would by in 2011.

Certification Program Accreditation

The PCGC is also investigating whether accreditation by an internationally recognized agency would assure others that the program's processes and procedures that ensure high quality, integrity, and independence are in place and followed. If the committee decides to do so, it could take as long as three years to become accredited. The committee will provide a decision by November 2008.

Agenda Item 19
MRC Meeting
May 6, 2008

Reliability Readiness Evaluation and Improvement

MRC Action Required
None

Background
The Reliability Readiness Evaluation and Improvement Program carries out on-site evaluations of reliability coordinators, balancing authorities, transmission operators, and other entities with responsibilities for operating the bulk power system reliably on a three-year cycle. The principal objectives of this program are to promote operational excellence in reliability readiness, capabilities, and performance of evaluated entities, identify areas for improvement, and highlight examples of excellence that can help entities and the industry improve its reliability readiness.

Program Status
As of April 15, 2008, NERC completed 11 of the 51 reliability readiness evaluations scheduled for 2008. Reliability readiness evaluation reports are posted on the following NERC Web site: http://www.nerc.com/~rap/.

Figure 1 shows a breakdown of reliability readiness evaluations by region for 2008.

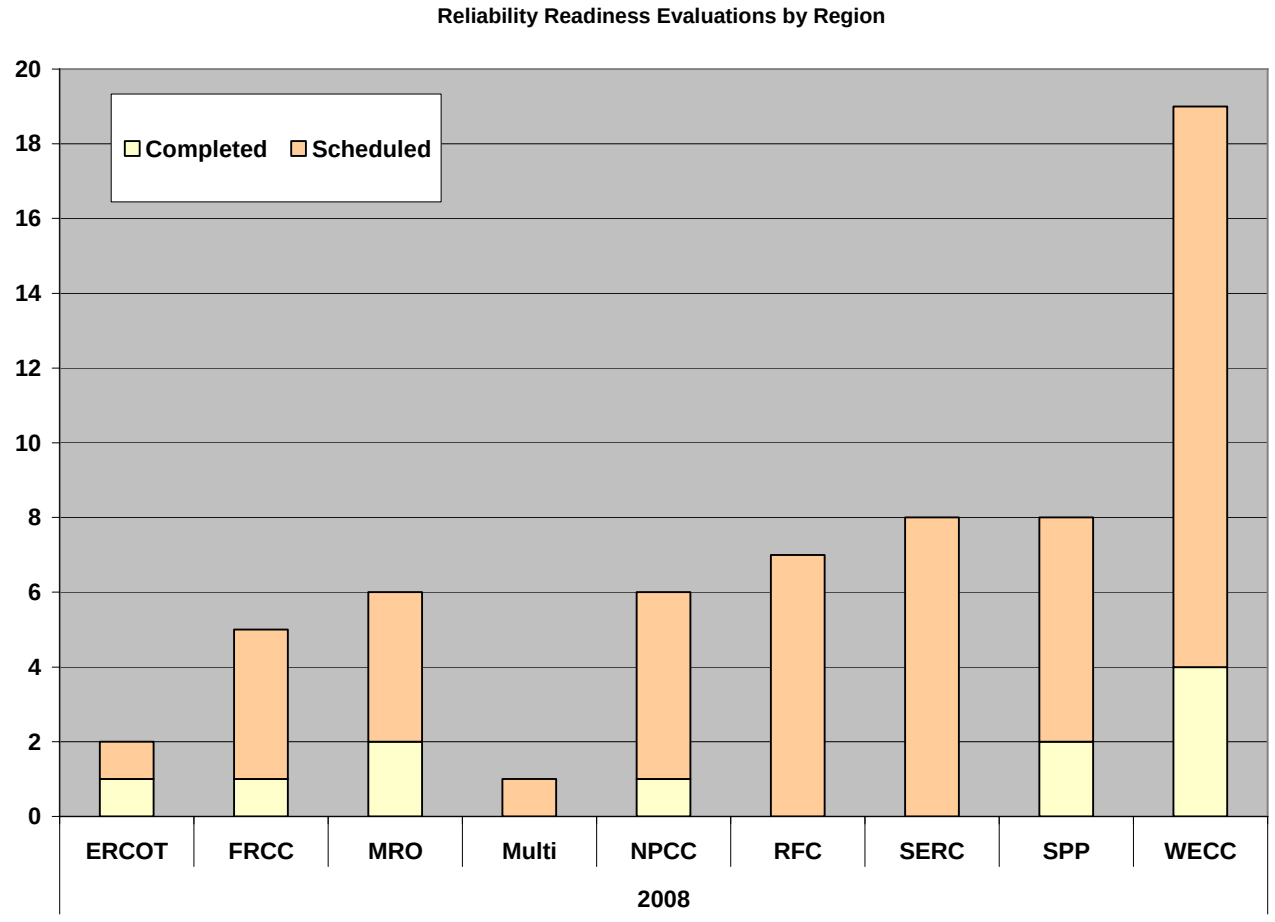


Figure 1

To conduct the reliability readiness evaluations, NERC relies heavily on industry volunteers to comprise the evaluation teams. Regional Entities identify volunteers to support evaluations of entities within their respective region, and NERC solicits volunteers from outside each evaluated entity's region to balance the teams. As of April 15, 2008, we have filled 95 of 103 out of region positions with industry volunteers.

Figure 2 shows a breakdown of support by region for 2008 so far.

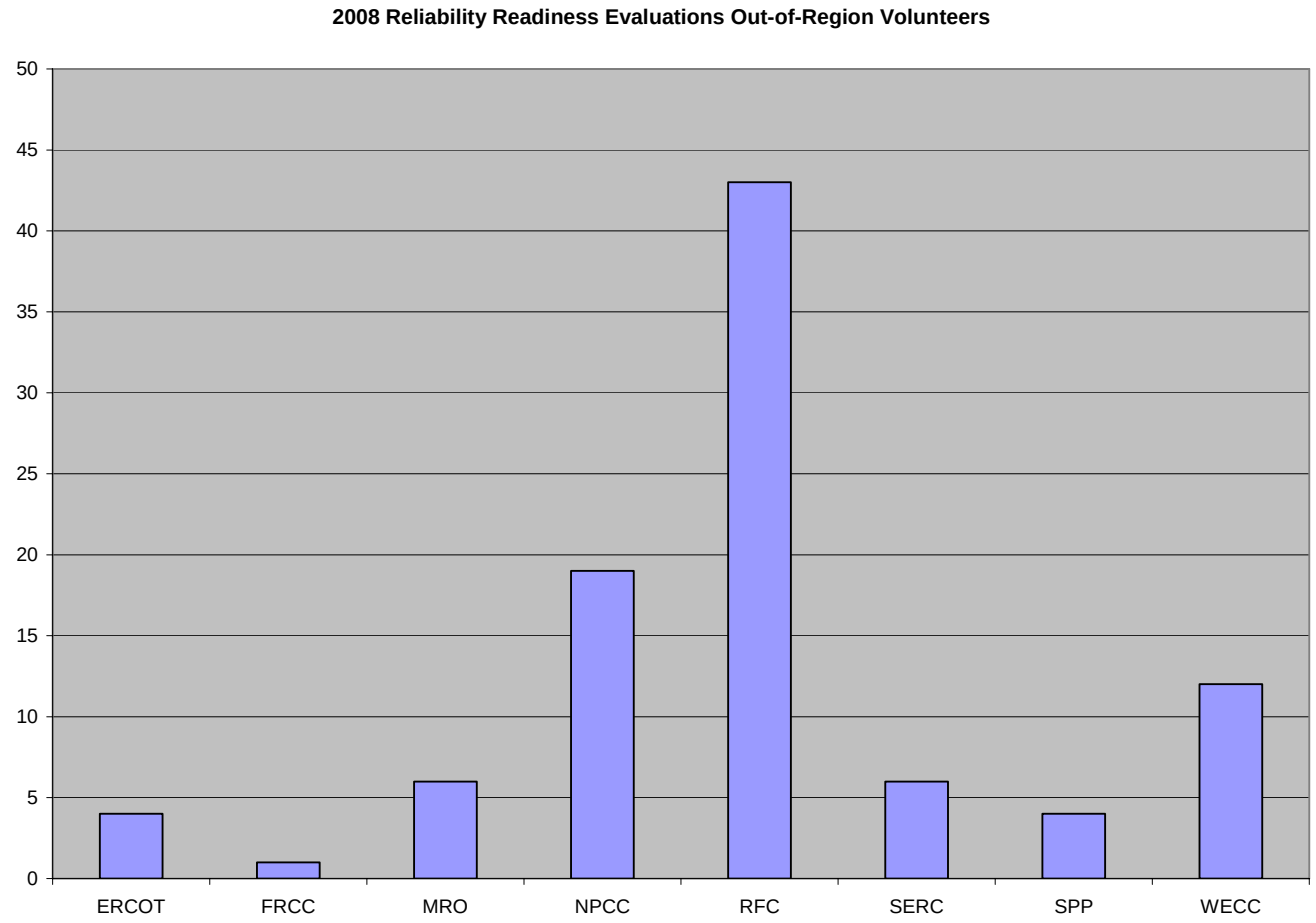


Figure 2

NERC also tracks the implementation of recommendations developed by the readiness evaluation teams. Since the February 2008 report to the Board of Trustees, NERC has added 204 recommendations for tracking based on reliability readiness evaluation findings published since the last report. At present, 3,171 recommendations are being tracked. There has been no significant change to the status percentages since the last report.

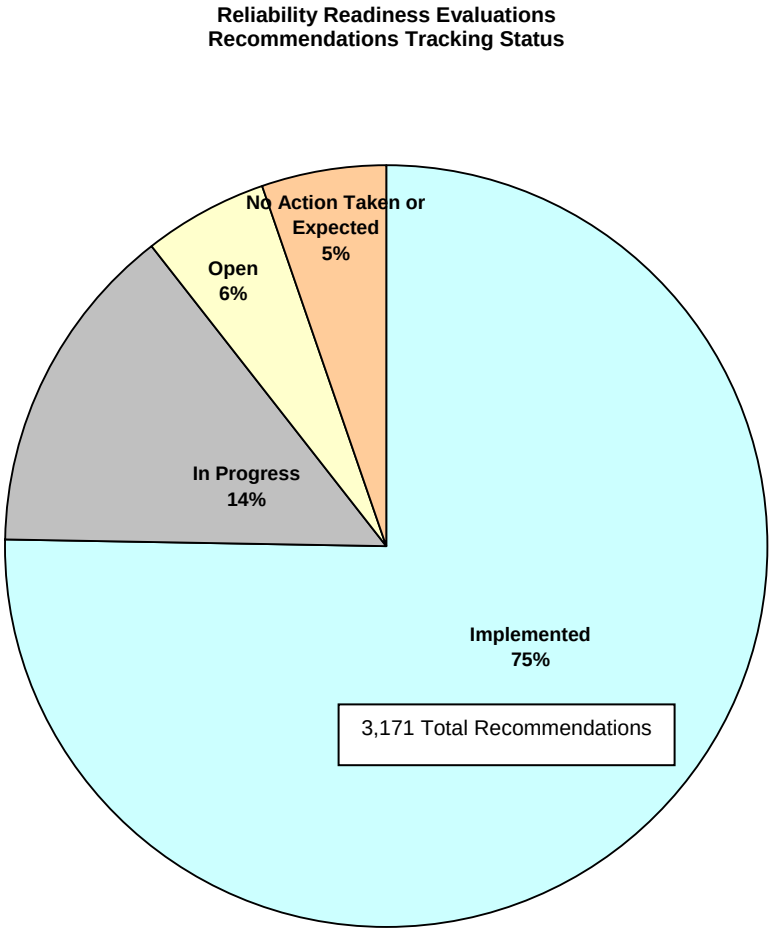


Figure 3

NERC and regional staff have collaboratively identified the most important recommendations from the readiness evaluations since the inception of the program. To date, 498 key recommendations have been identified with their status as shown in Figure 4.

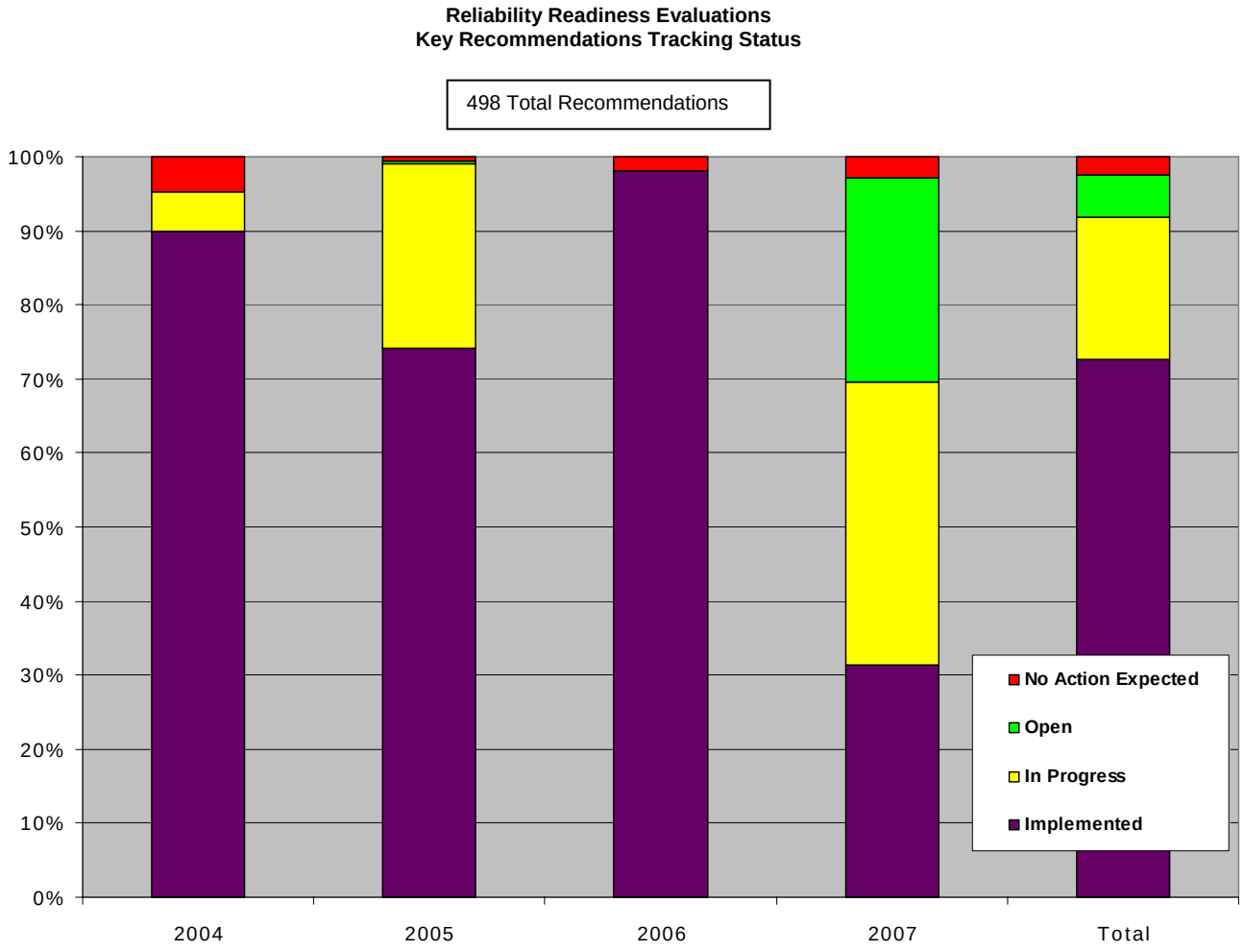


Figure 4