



Board Approved 4/28/09

NPCC 2009 Corporate Goals

The Board of Directors of NPCC has established the following corporate goals for 2009 which are consistent with the evolving long term strategic direction of the corporation and the approved work plans for the program areas identified in the 2009 NPCC Business Plan & Budget approved by NPCC on June 24, 2008, and conditionally approved by FERC on October 16, 2009.

Corporate Goals are a tool used by the NPCC Board to assess the organization's performance. Goals are designed to link corporate incentives to the execution of strategic priorities and accordingly may be modified should those priorities change during the course of the year. While the Board relies on the identified key metrics as the starting point for assessing the corporation's performance, the final assessment will also reflect the recommendations of the Board's Compensation Committee as to the corporation's performance in light of circumstances that unfold over the year. The Board is also charged, consistent with the Variable Incentive Program, with including funds in annual budgets for at risk compensation funding purposes.

Gateway Goal

Responsible budget administration and resource allocation are the foundations of effective and efficient corporate management and must be achieved before attainment of the specific program goals can be evaluated.

A. *Budgetary Control and Resource Allocation*

Develop an annual business plan and budget, consistent with delegated authorities under U.S. legislation and applicable Canadian Provincial Memoranda of Understanding or governmental agreements. Develop distinct business plan and budget (BP&B) and allocate costs appropriately for regionally-specific criteria services division among the ISO/BAAAs. Barring extraordinary costs associated with compliance enforcement, including compliance hearing costs, which are not included in the regional entity division's BP&B, in with the recognition that there is no longer a contingency account budgeted effective with 2009 and going forward per NERC preference, operate within 103% of approved NPCC corporate budget plus any Board approved applications from operating cash reserves to fulfill NPCC's responsibilities and exercise its authorities. Reprioritize activities and reallocate Full Time Equivalents as necessary to efficiently accomplish corporate goals and successfully achieve corporate objectives. Maintain allocation methodologies for the assessment of certain costs associated with activities in the Compliance Program area.

Goals	Threshold	Target	Stretch	Weight
Goal #1. Executive and Administrative Program	Implement within total project budget, corporate office relocation by 5/31/09. Incorporation by NERC of at least 60% of NPCC Board policy input.	Implement within total project budget, corporate office relocation on or about 5/1/09. Incorporation by NERC of at least 75% of NPCC Board policy input. Finalize remaining Canadian Provincial Agreements.	Implement under total project budget, corporate office relocation with a 4/09 move while not incurring additional month's rent or reduced operational functionality. Incorporation by NERC of at least 90% of NPCC Board policy input. Finalize remaining Canadian Provincial Agreements. Incorporate Performance Assessment recommendations.	15
Goal #2. Reliability Standards Program	Develop two Regional Standards drafts, utilizing the NPCC Regional Reliability Standards Development Procedure for RSC approval utilizing web-based tools by 12/09. Develop new Standards website to foster consistency with other Regional Entities.	Develop three Regional Standards drafts and receive NPCC RSC and General Member approval of one Regional Standard by 12/09 Develop new Standards website to foster consistency with other Regional Entities. Develop NPCC ballot recommendations for all proposed NERC Standards posted for pre-ballot review.	Develop three Regional Standards and receive NPCC General Member and BOD approval of one Regional Standard by 12/09. Develop new Standards website to foster consistency with other Regional Entities. Develop NPCC ballot recommendations for all proposed NERC Standards posted for pre-ballot review. Complete remaining NPCC Directory initial translations suitable for posting, review impact of expanded applicability to Directories and criteria mapping by 12/09.	15

Goals	Threshold	Target	Stretch	Weight
Goal #3a. Compliance Monitoring and Enforcement Program	Obtain Compliance Committee approval of a comprehensive set of Key Performance Indicators (KPIs) that portray the various aspects of CMEP performance, in NPCC, from both a process perspective and a quality perspective. KPIs will be developed for, but not limited to, the following areas: a) Compliance Registration; b) Compliance On-Site and Off-site Audits; c) Processing of Compliance Violation Notices; d) Processing of Settlements; e) Tracking of Mitigation Plans; f) Conducting Compliance Violation Investigations and Monitoring and Assessment of Compliance to NPCC Criteria. First phase (40%) of development completed by 6/09; Second phase (remaining 60%) completed by 10/09 and third phase will include an evaluation of Compliance KPI's effectiveness by 12/09	Obtain Compliance Committee endorsement of improvements in Compliance Program processes and procedures, based on a review and analysis of KPIs. Identified improvements can include more efficient (reduced timeframe) processing of data, clarifying CMEP implementation, increasing the quality of submitted data and increasing the level of registered entity compliance. For each improvement item identified specific action items will be created and accountability and schedule will be assigned to each action. – 11/09	Implement identified improvements to CMEP. NPCC Compliance Staff will complete all action items that have been identified by the NPCC Feedback Process and KPI metric implementation. Beyond meeting the required timeframes for each specific action items established by the Compliance Committee, the Compliance Staff will ensure that all compliance programs and procedures are updated based on enhancements. These changes will also be shared, with the stakeholders, at the NPCC Compliance Workshops and with other Regional Entities through participation on the NERC RCIG and CCC. —12/09	20
Goal #3b. NERC Regional Entity Compliance Program Audit.	NPCC Compliance Staff will perform a gap analysis regarding the NERC Agreed Upon Procedures (AUP) for Regional Entity Audit. The NPCC Compliance Staff will communicate the results of the Compliance Committee for endorsement. - 6/09	NPCC Compliance Staff will develop an action plan from the gap analysis and specific due dates for all audit preparation material such as: program procedures; record retention program and documentation collected from the registered entities during audits, investigations, enforcement meetings, as well as, the registration process. NPCC will also complete all pre-audit questionnaires and data requests from NERC Audit team by 9/09	NPCC Compliance Staff will have developed a comprehensive NPCC CMEP Implementation Manual which will include Compliance Program Procedures (approved by NPCC CC); Compliance Guidelines, (internal to NPCC Staff and approved by Compliance Managers) and instructional documentation for CDAA. These documents will be completed and posted on the NPCC Compliance Website by 9/09. The NPCC CMEP Implementation Manual will be finalized prior to the NERC Compliance audit scheduled for the third quarter in 2009.	15

Goals	Threshold	Target	Stretch	Weight
Goal #4 Training, Education & Operator Certification Program	Develop materials on the intended Reliability Coordinator/Balancing Authority approaches to task identification and training development associated with NERC Standard PER-005, "System Personnel Training," by 9/09	Establish an NPCC repository of training resources and learning verification activities addressing fundamental power system topics, which may be shared as elements of operator training in compliance with NERC Standard PER-005, "System Personnel Training," by 11/09	Establish an NPCC repository of training resources and learning verification activities addressing NPCC procedures employed in real-time by RC/BA operators, which may be shared as elements of operator training in compliance with "System Personnel Training," by 12/09	5
Goal #5 Situation Awareness Program	Identify the necessary data to provide geographically based wide area displays to enhance the operational awareness of the NPCC Reliability Coordinators by 3/09	Implement among the NPCC Reliability Coordinators a common geographically based wide area display by 6/09	Lead the NERC Reliability Coordinator Working Group in the expansion of the RC wide area view using the NPCC based geographic approach to wide area displays and guide future direction of the project by 12/09	10
Goal #6a. Reliability Assessment & Performance Analysis Program	Identify the concepts necessary to accommodate inter-Reliability Coordinator area operating reserve in NPCC Regional Reliability Reference Directory 5, "Operating Reserve," by 11/09	Incorporate the necessary requirements to accommodate inter-Reliability Coordinator area operating reserve in NPCC Regional Reliability Reference Directory 5, "Operating Reserve," by 11/09	Obtain RCC approval of a draft NPCC Regional Reliability Reference Directory 5, "Operating Reserve," including inter-Reliability Coordinator area operating reserve by 11/09	10
Goal #6b. Reliability Assessment & Performance Analysis Program	Conduct NPCC Overall Transmission Assessment to evaluate the steady state and dynamic performance of the NPCC region and identify the reliability impact of proposed major facilities in the adjacent RFC region. Complete report and obtain RCC approval – 11/09	Conduct NPCC Overall Transmission Assessment to evaluate the steady state and dynamic performance of the NPCC region that also evaluates the reliability impact of proposed major facilities in the adjacent RFC region. Complete report and obtain RCC approval – 11/09	Conduct NPCC Overall Transmission Assessment to evaluate the steady state and dynamic performance of the NPCC region that also evaluates the reliability impact of proposed major facilities in the adjacent RFC region and assesses the potential for significant increase penetration levels of variable generation such as wind-power as a component of climate change initiatives. Complete report and obtain RCC approval – 11/09	10

Components of Goal #1 – Executive & Administrative:

A. NPCC Regional Entity Administration

Cost-effective and timely implementation of corporate office relocation. Incorporate recommendations from the industry survey on NERC/Regional Entity Performance Assessments that are supportive of increased effectiveness and efficiency of international reliability assurance in the Northeast. Exercise delegated authorities and fulfill delegated responsibilities under the Regional Delegation Agreement and Canadian Provincial Memoranda of Understanding. Finalize and implement remaining Canadian Provincial MOUs/Agreements in concert with applicable Canadian regulatory and/or governmental authorities. Maintain equitable allocation methodologies for non-socialized Compliance Monitoring and Enforcement Program costs. Provide NPCC employees with training, human resource support and professional development opportunities to improve overall productivity.

B. Strategic Direction

Provide policy direction to NERC Board, NERC senior management, stakeholders, regional and industry executives. Influence financial policy through participation in the NERC Regional Entity Budget Group to focus NERC on its core functions of standards, compliance and assessment.

C. Governmental and Regulatory Liaison

Represent NPCC reliability interests with Federal/State/Provincial regulatory and/or governmental authorities, and coordinate a forum of industry and governmental/regulatory representatives for information exchange and the development of consensus recommendations to the NPCC Board.

Components of Goal #2 – Reliability Standards:

A. Regional Reliability Standards Development

NPCC as part of its charge from NERC must develop Regional Standards as outlined in the NERC 2009-2011 Work Plan. Currently there are four Regional Reliability Standards identified in the work plan. Once developed, the companion NERC Reliability Standard for each of these will provide NPCC with a standard template of what requirements must be in the Regional Standard. NERC is “expected” to provide two of these templates in 2009 according to the NERC Work plan and considering current work underway, however this is subject to change depending on the priority of the total amount of standards related activity NERC is engaged in.

- ✓ Complete the review of all criteria and directories to determine the need for revision based on the impact of expanding “applicability”, resulting from a BES definition of 100 kV and above, and initiate the necessary revisions.
- ✓ Continue with development of additional NPCC Directories and complete initial translations of all the existing NPCC Criteria into their required directories. Complete draft of “mapping” document indicating locations for current “B” Guideline and “C” Procedural language. Develop recommendations for any remaining language not incorporated into a Directory or NPCC Regional Standard.
- ✓ Develop drafts suitable for open posting for three of the four Regional Standards mandated by NERC utilizing the NPCC Regional Reliability Standard Development Procedure
 - Underfrequency Load Shedding Program (Scheduled for 2009)

- Disturbance Monitoring (Scheduled for 2009)
- Balancing Authority Controls (Scheduled for 2009)
- Special Protection Systems (Now scheduled by NERC for 2010)
- ✓ Develop a Regional Standard for Underfrequency Load Shedding Program, targeting Regional balloting by December, 2009.
- ✓ Develop new Standards website to achieve greater consistency with other Regions by coordinating the promulgation of the common attributes of standards development and associated information contained in the NPCC and other Regions' delegation agreements while achieving the similar "look and feel". Ease website navigation, increase website compatibility with handheld devices, and increase transparency of the NPCC Regional Standards Development Procedure.
- ✓ Identify additional future regional standard opportunities by completing the initial set of Regional Reliability Directories incorporating the NERC Reliability Standards, Regional Standards and regionally specific, more-stringent Criteria
- ✓ Draft proposed standards utilizing regional technical committees
- ✓ Accomplish all directives of NERC and U.S. and Canadian Provincial governmental and/or regulatory authorities with regard to regional standards development and procedures

B. ERO Standards Development

Through participation on the NERC Standards Committee, Regional Reliability Standards Working Group, Functional Model Working Group, Standard and SAR Drafting Teams, and coordination of all standards related activities, accomplish the following objectives on an ongoing basis:

- ✓ Coordinate the development of NERC reliability standards within the existing and revised NERC 2009-2011 work plan
- ✓ Complete thorough technical reviews of all NERC standards being developed or revised and coordinate comments for Northeastern North America
- ✓ Solicit technically qualified candidates from Northeastern North America to participate on each of the NERC drafting teams
- ✓ Participate in NPCC and NERC Standards Workshops as requested
- ✓ Review and develop comments on FERC preliminary staff assessments as appropriate
- ✓ Provide and coordinate Regional recommendations or issues to the NPCC Members of the NERC Registered Ballot Body and directly participate in ballots for NERC standards
- ✓ Review, develop, and submit comments on FERC Notice of Proposed Rulemaking (NOPR) for standards related issues as appropriate
- ✓ Evaluate proposed standards utilizing regional technical committees, task forces and working groups
- ✓ Advise stakeholders and regulators about issues related to standards development

Components of Goal #3a – Compliance Monitoring & Enforcement:

Develop a comprehensive set of Key Performance Indicators that accurately and succinctly portray the various aspects of CMEP performance in NPCC. With an additional year of data available, NPCC Compliance Staff will develop an enhanced and comprehensive set of metrics that will build upon the initial set of broad and general

metrics that were introduced during 2008. These KPIs will cover two aspects of CMEP implementation- process and quality. KPIs will be developed by each sub-program Manager and could include, but not be limited to, the following:

- ✓ Number of inquiries received regarding the implementation of CMEP
- ✓ Categorization of inquiries received
- ✓ Number of Registered Entities
- ✓ Number of Self-certifications
- ✓ Quality of Self Certifications
- ✓ Number of On - time submittals, Number of Late Submittals
- ✓ Number of Compliance Audits conducted, as per 2009 schedule
- ✓ Number of Spot checks performed
- ✓ Quality of audit preparation
- ✓ Number of Initial Notices of Alleged Violations (IOAV) issued.
- ✓ Number of Notices of Alleged Violations (NOAV) issued.
- ✓ Number of Notices of Confirmed Violations (NOCV) issued.
- ✓ Number of Settlements, length of settlements
- ✓ Quality of Settlement related documentation
- ✓ Number of Hearings Held
- ✓ Length of violation process (from identification of violation to issuance of NOCV)
- ✓ Tracking of Mitigation Plans
- ✓ Quality of Mitigation Plans

These KPIs will also be used to develop regular, comprehensive monthly reports that can be used to furnish required NPCC Compliance Program Status report to the NPCC BOD, NERC BOT CC, FERC, Canadian Regulatory Bodies, and the NPCC Compliance Committee. The KPIs developed will highlight various process performance and quality aspects related to the implementation of the CMEP in NPCC.

The KPIs will also be presented, visually, on the NPCC Compliance Page at www.npcc.org using the *iDashboard* software product.

In 2008, the NPCC Compliance Staff developed and the NPCC Compliance Committee approved the *NPCC Compliance Feedback Process* and the *Action Plan to Enhance the Compliance Monitoring and Enforcement Program*. This feedback process was based on the *implementation* of the CMEP in 2008. Enhancements made to the implementation of the CMEP based on this feedback will continue to be implemented in accordance with the NPCC Compliance Committee approved Action Plan.

In 2009, using the calculated enhanced set of KPIs, the NPCC Compliance Staff will review and analyze the data contained in the KPIs related to the performance by both Registered Entities in meeting requirements the CMEP and the NPCC Compliance Staff in processing the compliance data received. NPCC Compliance Staff will utilize this analysis to identify areas of improvement. Each area of improvement will be documented in a report that will include a description of the improvement, including defined benefits and a timeline for implementing the improvement.

The improvements identified using the KPIs along with those enhancements obtained from the feedback process developed in 2008 will allow NPCC Compliance Staff to

assure that the CMEP will continue to evolve and provide for the highest level of bulk electric system reliability in NPCC.

NPCC Compliance Staff will implement all of the improvements to the CMEP identified and documented from the analysis of the KPI data. This implementation can take the form of revised processes, revised compliance procedures, issuance of Compliance Guidance Statements, and notification to registered entities via bulletins and during Compliance Workshops.

These improvements will supplement any enhancements that may be identified by the exiting NPCC Feedback Process that was approved by the NPCC Compliance Committee in 2008.

Components of Goal #3b – NERC Regional Entity Compliance Program Audit.

NPCC Compliance Staff will review all current CMEP implementation documents and processes and perform a gap analysis against RDA Compliance Program requirements. NPCC Compliance Staff will develop additional documentation as needed.

NPCC Compliance Staff will compile and organize all information in response to NERC pre-Audit request.

NPCC Compliance Staff will identify all necessary documentation in support of the CMEP implementation, including all current Compliance procedures and internal compliance guidelines.

The Compliance Staff will then produce the NPCC CMEP Implementation Manual.

Components of Goal #4 – Training, Education & Operator Certification:

A. Training – Implementation of PER-005

Develop presentations on the intended Reliability Coordinator/Balancing Authority approaches to task identification and training development associated with NERC Standard PER-005, “System Personnel Training.”

Share among the NPCC RCs/BAs experiences on implementation of new NERC standard PER-005. Consider strategies to deal with any implementation difficulties.

Establish an NPCC repository of training resources and learning verification activities on NPCC procedures employed in real-time by RC/BA operators which may be shared as elements of operator training in compliance with “System Personnel Training.”

B. Operations Coordination

Plan, organize, deliver, and report on two NPCC System Operator Training Seminars which will address unusual system events, pre and post-seasonal assessments and inter-area operational topics by 5/09 and 11/09.

Revise and update NPCC Document C-13, “Operational Planning Coordination.”

Complete the 2009 Summer and 2009/2010 Winter CO-12 NPCC Reliability Assessments. Incorporate multi-area probabilistic simulation results in each assessment.

Complete and put into place a new NPCC Document C-45, “CO-12 Seasonal Assessment Methodology”

Conduct pre-seasonal satellite phone tests to ensure that the equipment and service perform as required, and provide user training for the appropriate Operations and Restoration personnel.

Components of Goal #5 – Situation Awareness Program:

A. Operational Awareness Tool

Recommendation 22 of the joint report, “U.S.-Canada Power System Outage Task Force Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations-April 2004,” states in part:

“Evaluate and adopt better real-time tools for operators and reliability coordinators ••• A principal cause of the August 14 blackout was a lack of situational awareness ••• The need for improved visualization capabilities over a wide geographic area has been a recurrent theme in blackout investigations.”

In response to this initiative, NPCC is implementing a geographically based visualization of selected reliability indicators to expand the operational awareness of the Reliability Coordinators (RC) of NPCC, providing an enhanced wide area view of each of the five RC footprints in the Northeast and permitting the Reliability Coordinator to make more informed real-time operating decisions.

. Each Reliability Coordinator of NPCC will have access within the control room to the following near real time displays:

- a geographic visualization of the complete NPCC footprint; or
- a detailed geographic visualization of any of the neighboring Reliability Coordinator footprints within NPCC.

Each screen displayed will include the following data:

- Reliability Coordinator Area load
- Reliability Coordinator Area Control Error (ACE)
- scheduled net interchange with its neighboring control area
- actual net interchange with its neighboring control area
- Reliability Coordinator Area operating reserve
- key interface loadings with limits
- key bus voltages with typical operating range

Various dynamic, visual prompts will also be provided as conditions change. Arrows will indicate interface flow direction, and the size of the arrow will appear proportional to the magnitude of the flow. Key quantities will be color coded; for example, the display color for the system operating reserve will change if the quantity should fall below the Area’s operating reserve obligation. The data will be refreshed at least every ninety seconds.

NPCC will also leverage the efforts of this project to answer the recent request of the Federal Energy Regulatory Commission and the NERC to supply near real time data with which “•• the health of the Eastern Interconnection may be measured ••” by filtering the information available through the NPCC displays to share only the basic data necessary to monitor the overall NPCC status. Thus the FERC and NERC requests can be answered with minimal additional cost.

Steps to be taken to realize the operational awareness tool include:

- ✓ Identify the data elements necessary for each Reliability Coordinator Area to convey the state of its operational security
- ✓ Identify an NPCC host server to support the near-real-time displays for access by the NPCC Reliability Coordinators and NPCC Offices
- ✓ Develop draft agreements to permit access by the NPCC Reliability Coordinators and the NPCC Staff to the data and displays of the operational awareness tool
- ✓ Modify the data as necessary for access and display by the FERC Reliability Monitoring Center (RMC)
- ✓ Develop a methodology to permit the visibility of certain Canadian operational reliability data
- ✓ Develop draft agreements to permit access by the Federal Energy Regulatory Commission and NERC to the data and displays of the operational awareness tool
- ✓ Establish protocols to utilize the operational awareness tool to assist in the identification of necessary actions to respond to threats to the security of the Reliability Coordinator Areas of NPCC and to enhance communications during emergency conditions
- ✓ Establish protocols for FERC Staff and NPCC Staff to permit a vehicle through which FERC Staff may question NPCC Staff regarding the operational awareness displays which it is viewing, precluding direct communication with the Reliability Coordinator control rooms
- ✓ Establish a training period for the use of the operations awareness tool
- ✓ Implement the operational awareness tool

B. Operating Tools

As a follow-up to the recommendations presented in the report of the NERC Real-Time Tools Best Practices Task Force, the TFCO will issue an automated tools survey to the NPCC RCs, BAs, TOPs and TOs in order to assess the current status of their operational readiness vis-à-vis the report of the NERC Real-Time Tools Best Practices Task Force. The responses of the entities will be assessed to identify two concerns. First, the Task Force on Coordination of Operation will ensure that the operating tools available to the NPCC control rooms continue to be adequate; second, the survey will identify for the RCs, BAs, TOPs and TOs of NPCC potential compliance issues based on the recommendations presented in the report of the NERC Real-Time Tools Best Practices Task Force.

Utilize web services to enhance the reconciliation of inadvertent interchange. This initiative will reduce the manpower necessary on the part of the Reliability Coordinators to reconcile accumulated inadvertent through bilateral negotiations. The automation of the process will further ensure continuing compliance with the NERC Reliability Standards by achieving inadvertent balance in a more timely manner. The use of web services will also be pursued to speed the implementation of Shared Activation of

Reserve and NPCC Regional Reserve Sharing. In doing so, operational reliability will be enhanced by the more rapid availability of both products.

Monitor the development and assess the feasibility of the NERC North American SynchroPhasor Initiative (NASPI) for use within NPCC.

C. Enhance System Preparedness

Automate the data input and output for the NPCC Weekly Conference Calls. Currently each Reliability Coordinator of NPCC manually submits the data to NPCC through either e-mail or telecopy on the afternoon preceding the Weekly Conference Call of the Reliability Coordinators; NPCC Staff compiles the data and provides a single spreadsheet which provides an overview of the anticipated operating conditions in each Area for the next ten-day period. This spreadsheet provides the starting point for the discussions which take place during the Weekly Conference Call. An automated solution will reduce Staff time by about two man-hours per week, together with the effort expended by the five Areas. It will also serve to enhance the quality of the data by introducing automated data.

D. Maintain Emergency Telecommunications Coordination

To ensure the capability for continued voice communications among NPCC and its Reliability Coordinators, a satellite telephone network has been established. This back-up communications system will function in the event of a collapse of the Public Switched Telephone Network (PSTN). Emergency systems such as the Government Emergency Telecommunications Service (GETS), a service of the Department of Homeland Security, while enabling priority usage to authorized users during an emergency, does not operate for calls directed to Canada; further, it is still dependent on the PSTN. Only the prioritization of a given call is guaranteed. The ultimate timeliness of the completion of the call cannot be guaranteed in a major emergency. Thus cross-border voice communications can still be maintained among the Canadian Reliability Coordinators of NPCC and the Reliability Coordinators in the United States. The system connects NPCC Staff and the five Reliability Coordinators of NPCC, and it was installed and successfully tested by NPCC Working Group IST-02 in the autumn of 2008. Protocols for the use of the NPCC satellite phone system will be finalized, and additional enhancements to the system will be identified through further testing and drills of the NPCC satellite phone system.

Maintain NPCC's portion of the NERC Alert e-mail addresses and coordinate this effort with NERC and the other Regions.

E. Cyber Security Coordination

Participate in review of NERC proposed Reliability Standards related to Infrastructure Security and Technology to ensure the development of cyber standards which will effectively maintain the cyber security of the power system infrastructure and with which the entities of NPCC can demonstrate realistic compliance.

Update NPCC's Critical Asset Identification Guideline (B-27) to remain consistent with NERC's Critical Asset Identification Guideline.

Review, without specifying entities, the January 15, 2009 and July 15, 2009 summaries of FERC Cyber Security submittals to identify possible technical implementation issues.

Components of Goal #6a - Reliability Assessment & Performance Analysis:

A. Operating Reserve and Control Performance

(I have to agree with Charlie Moser that this is a relatively routine, or at least expected, task to be performed by NPCC.)

Identify and incorporate the concept of inter-Reliability Coordinator area operating reserve into the NPCC markets. To accomplish this in a secure manner, NPCC will develop a white paper identifying any possible reliability concerns which can be realized in introducing the concept. Having identified these concerns, Regional Reliability Reference Directory 5, "Operating Reserve," will be drafted to permit inter-Area operating reserve to be carried out without impacting reliability.

Develop an annual report on the potential impact of wind energy penetration on system control performance.

Support enhancements to the NPCC Facilitated Transaction Checkout Procedures.

B. System Restoration

Revise and update NPCC Regional Reliability Reference Directory 8, "System Restoration," and its Appendices. Develop an appendix establishing a common methodology for the RC area review of restoration plans. Consider possible future restoration requirements for:

- ✓ a time standard for blackstart generators;
- ✓ a time standard for substation operability and / or battery bank mission time;
- ✓ a minimum backup fuel requirement; and
- ✓ a time standard for the testing of backup diesel generators.

Survey system synchronization equipment and training activities related to system synchronization during restoration.

Complete an annual review of the Reliability Coordinator area restoration plans.

C. Revise the "NPCC Regional Reliability Plan"

Identify the applicable planning tasks to the functions of the NERC Reliability Functional Model (RC, BA, IA, TOP, TO, GO and GOP) to be incorporated in the "Northeast Power Coordinating Council Regional Reliability Plan" and draft a revised "Northeast Power Coordinating Council Regional Reliability Plan" incorporating these planning requirements for RCC approval by November 2009.

Components of Goal #6b - Reliability Assessment & Performance Analysis:

A. Conduct NPCC Overall Transmission Assessment

Conduct the NPCC Overall Transmission Assessment to evaluate the steady state and dynamic performance of the NPCC region that also evaluates the reliability impact of proposed major facilities in the adjacent RFC region and assesses the potential for significant increase in penetration levels of variable generation (such as wind-generation)

as a component of climate change initiatives. Recommendations from the evaluation will form the basis for any related proposed follow-up activities.

The NPCC Reliability Assessment Program calls for an Overall Transmission Assessment (or evaluation) of the reliability of the planned NPCC bulk power system every three years. This evaluation builds upon and supplements the Transmission Reviews conducted annually by each of the NPCC Areas by examining the system from a broader regional and inter-regional perspective.

In conjunction with this study, NPCC will also lead and coordinate the Eastern Reliability Assessment Group's 2014 inter-regional assessment by the RFC-NPCC Study Forum, whose main objective is to assess the impacts of the large planned HVDC, 765 kV, 500 kV and 345 kV system reinforcements in the northeastern U.S. and eastern Canada.

A select list of design and extreme contingencies (based on NPCC criteria) will be evaluated. A select number of 'beyond criteria' contingencies also will be evaluated to further test the overall resiliency of the NPCC and inter-regional systems. Contingencies of each category, both within and outside NPCC, will be evaluated. The selected contingencies will include: 1) five to ten of the typically most severe design contingencies within NPCC based on recent Area Transmission Reviews and other studies; 2) five to ten of the potentially most severe design contingencies in the neighboring RFC region; 3) three to five severe beyond criteria contingencies within NPCC; and 4) three to five severe beyond criteria contingencies in the neighboring RFC region.

- ✓ **Threshold Level:** The study will assess the performance of the NPCC system in a future year and evaluate the dynamic and steady state performance of the NPCC system for various design and extreme contingencies under conditions projected for 2013.
- ✓ **Target Level:** In addition, the study will also include an evaluation of the impact of proposed large future system developments in the adjacent RFC region and simulation of the effect of extreme contingencies in the RFC region and potential power swings arising from disturbances outside the NPCC's interconnected systems."
- ✓ **Stretch Level:** In consideration of the potential for significantly increased penetration levels of variable generation such as wind-power as a component of climate change initiatives, sensitivity cases will also be examined to determine if the dynamic performance of the transmission system exhibits trends that could adversely impact reliability.

B. August 14, 2003 Blackout Follow - up Analysis

Complete Task 5 of the TFSS *August 14 2003 Northeast Blackout Study Plan*, which is a follow-up activity related to a recommendation of the 2003 NPCC Blackout report "to evaluate various possible mitigation measures to improve the ability of the NPCC member systems to withstand a major system disturbance originating from a wide range of initiating conditions." Recommendations from the Task 5 evaluation will form the basis for any related proposed follow-up activities.

Incorporate the RCC approved modifications to the UFLS program through the regional UFLS standard development.

C. Model Development and Improvement

Develop process for assembling models replicating conditions for the analysis of major system events.

Develop the MMWG 2009 power flow and dynamic models according to the approved schedule.

Participate in on-going ERAG, NERC and MMWG efforts to improve the timeliness and accuracy of Wide-Area regional transmission model representations used for long-term planning and event analysis.

Complete the survey of NPCC governor response. Initiate effort to enhance the governor modeling on a unit by unit basis. Coordinate effort with the NPCC CO-1 Working Group to obtain actual unit governing response data.

Develop a white paper that identifies NPCC Guidelines for load modeling in transmission system analyses.

D. Reliability and Adequacy Assessments

Review major system disturbances and misoperations as they occur on the system, identifying lessons learned and recommending any follow-up actions.