2012-2015 SHARED BUSINESS PLANNING AND BUDGET ASSUMPTIONS

PURPOSE AND SCOPE

Between January and March 2011, NERC and the eight Regional Entities collaborated in the development of a common set of business planning assumptions. The results from that effort are contained in this document. These assumptions are based on the ERO goals and objectives [add reference to final goals and objectives], including the 2012 targets contained therein.

The document will be used by NERC and each of the Regional Entities as an input to each organization’s 2012 business plans and budgets and longer term business and budget planning, recognizing there may be unique factors that drive differences in each organization’s final business plans and budgets subject to the approval of their respective governing bodies.

Where additional Program Area resource needs are anticipated or specific Program Area undertakings are anticipated, it is the intention that this document will also address the allocation of those resource requirements and needs between NERC and the Regional Entities, as well as identify assumptions with respect to industry resource support with respect to particular programs (e.g. standards development).

OVERVIEW OF BUSINESS ENVIRONMENT

LEGAL CONTEXT

NERC and the Regional Entities will continue to work under the regulatory framework governing the establishment and enforcement of reliability standards for the bulk electric system established by applicable governmental authorities in the United States and Canada.

NERC and the Regional Entities do not at this time anticipate substantive generic amendments to the terms of their existing delegation agreements, which will not expire during the planning period, or changes to Regional affiliations, but individual amendments may be necessitated by changes in certain Regional Entities’ rules.
documents. NERC and the Regional Entities, will, however, make significant strides toward implementing the ERO Enterprise model for the benefit of stakeholders.

While there is a collective expectation of increased workload, the scope of each Regional Entity’s delegated authorities and responsibilities will remain relatively constant, with incremental process improvements through the collaborative efforts of NERC and the Regional Entities.

NERC and its Regional Entities will continue to work in a collaborative way with the North American Transmission Forum, Inc. and North American Generator Forum (collectively “Forums”) and expects the Forums will also provide public lessons learned, industry training, and opportunities for the industry to further advance reliability.

**BUSINESS ENVIRONMENT**

Economic conditions will continue to place cost pressures on NERC and the Regional Entities to work as efficiently as possible and leverage overall ERO resources. Cost pressures on the electric utility industry may affect stakeholder resources available to participate in NERC and Regional Entity activities.

Since NERC and the Regional Entities business plans, budgets, and resource requirements were and will continue to be established based upon the assumption of continued industry participation in support of key program areas, including but not limited to event analysis, reliability assessments, and standards development, any significant change in the quality or availability of industry resources will increase NERC’s resource and funding requirements.

**NERC COMMITTEES**

There will be increased coordination with respect to resource and workload planning between and among NERC management and NERC’s committees, including, but not limited to the Operating Committee, Planning Committee, Critical Infrastructure Protection Committee, Standards Committee, and Compliance and Certification Committee. The coordination is expected to result in improved identification of incremental resource needs, more effective resource management and increased efficiency in resource allocation.
RELIABILITY STANDARDS PROGRAM

1. NERC and the Regional Entities will lead the development of a revised definition of adequate level of reliability (“ALR”) of the bulk electric system. This will be accomplished through the leadership of the NERC Reliability Assessment and Performance Analysis Program Area, the Operating and Planning Committees. The revised definition will be delivered to the Board of Trustee’s for consideration in February 2012. In the event the ALR revision process results in a need for standards revisions or additions, additional resources may be required at NERC, as well as from the Regional Entities and industry.[Need to cross reference reference in RAPA and address any resource impacts]

2. Over the planning period, NERC will implement a results-based standards program based on a NERC Board of Trustees endorsed prioritization process with regular consideration of substantive standards developments and FERC rulings containing standards directives. The program deliverables will focus on revisions to existing reliability standards and development of new reliability standards that are expected to lead to the greatest improvement in bulk electric system reliability. Training materials will be developed, training will be provided, and the results-based approach will be applied to applicable existing and future standards projects. Additional NERC resources will be required to support his effort. At the NERC level technical personnel with training skills either in training department or within standards will be needed to assure training is available for drafting teams as their membership changes due to attrition or when new teams are created. At the Regional level resource allocation of time level time to receive training will be necessary, at a minimum.[State generally whether there are anticipated Regional and/or Industry resource impacts associated with this assumption in 2012 or later in the planning period 2013-15]

3. NERC will modify the standards development process to improve speed and quality, and to explicitly address cost-effectiveness, while maintaining ANSI accreditation for those standards which qualify as ANSI standards. Examination of equivalent registration in Canada will be undertaken. The process modifications will involve the use of pilot programs in 2012 and possibly additional pilot programs in later years. At the NERC level, maintenance of ANSI certification will require a high level of engagement with ANSI requiring more labor resources. There are no Regional impacts expected.[State generally whether there are anticipated NERC, Regional and/or Industry resource impacts associated with this assumption in 2012 or later in the planning period 2013-15]
4. NERC and the Regions will address and appropriately prioritize all fill-in-the-blank standards over the planning period. NERC standards development staff is expected to provide increased coordination of regional standards development by becoming more involved earlier in the regional standard development efforts to help assure consistency in regional and continent-wide standard technical content, format, and quality. Depending on the number of regional standards, additional NERC resources beyond the 2 FTEs currently dedicated to supporting the regional programs may be required. [State generally whether there are anticipated NERC, Regional and/or Industry resource impacts associated with this assumption in 2012 or later in the planning period 2013-15]

5. NERC and the Regional Entities continue to expect cyber and critical asset security to be a priority in the United States and Canada, with significant oversight by applicable government authorities. CIP-002 through CIP-009 (or other applicable designation), version 4, is targeted for submittal to the NERC board and filing in 2012, with regulatory response expected in 2012 and expected implementation in 2013 at the earliest. [State generally whether there are anticipated NERC, Regional and/or Industry resource impacts associated with this assumption in 2012 or later in the planning period 2013-15]

6. Assumptions with respect to highly specialized technical resource requirements associated with critical infrastructure standards development are addressed under the Critical Infrastructure Protection Program Area.

7. Assumptions regarding additional Compliance Program Area resources to support standards development are addressed under the Compliance Area.

8. A decrease in workload is expected in years after based on the results-based standards initiative and improved standards development process due to improvements in standards. The number of projects contained in the Reliability Standards Development Plan is expected to increase over the planning period as the results-based standards initiative is fully implemented, work necessary to complete the response to FERC Order 693 directives is finalized, and the existing requirement to review each standard every five years is implemented. However, the scope of these projects is generally expected to be narrower than would otherwise potentially exist in the absence of the Results-Based Standards initiative. NERC will need more expertise in the project management, technical writing disciplines in the Standard Department, along with additional standards process administrator support to manage the standards development governance and stakeholder interface. Additional analyst resources for website content are anticipated over the period to aid in fulfilling the ERO obligation to provide a comprehensive, reliable rendition of the status of standards (effective dates, implementation plans) in the US and the nine Canadian regulatory jurisdictions. [State generally whether there are anticipated NERC, Regional...
NERC projects to continue its current development and regulatory filing activity level in 2012-2015 in accordance with the prioritization process of the Standards Committee. Generally, NERC will plan on a one year timeline to respond to future FERC directives on standards development while addressing the directives backlog over the next five years. This will require additional NERC resources to support NERC’s standards functions in the area of the newly created Standards Compliance function/regulatory coordination. No regional impacts are expected.

10. NERC projects to develop and process 12-15 substantive NERC standards related filings per year, conduct approximately 25 ballots, and provide 25 commenting rounds under the successive balloting process for standards or interpretations.

11. The Regional Entities expect to [insert assumptions regarding Regional Entity standards development in 2012 and during balance of planning period 2013-15]

12. Regional Standards Development processes will be periodically reviewed and updated as necessary to keep pace with similar changes with the NERC process. This may have an impact on Regional Entity resource requirements. NERC will provide increased standard drafting team training to enable all drafting team members to understand their role in the standards development process. This added training will require additional resources at the NERC level as time progresses in the near term. [NERC and/or Regional level? Just 2012 or possibly in future years as well?] [Address whether resource additions required to support this activity are required in the Standards and/or Training areas, taking into account the centralized roll of training discussed in the Training section of these Assumptions]

13. NERC and the Regional Entities will:

- increase communication and outreach opportunities with stakeholders and NERC standing committees;
- increase project level communications, education, and training for new or revised standards;
- continue to improve the standards portion of the NERC and Regional Entity Websites;
- work with stakeholders to jointly identify needs for new or revised standards or standards products; and
- Provide the necessary information and background to allow the industry stakeholders to perform a cost effectiveness analysis.
These efforts will require additional resources to provide management oversight and accountability for these key standards interface and communication activities. At the NERC level is requires resource in Standards Information to support website content and in standards Compliance function to assure standards meet regulatory requirements in all Us and Canadian jurisdictions regulatory coordination. [Resources impacts at Regions? Industry?]

14. NERC will continue to transform its standards organization to sustain a higher level of activity, output and quality. This effort will require an increase in NERC resources including:

- increased technical resources to support training and technical writing capabilities to support drafting teams in the development of results-based standards;
- increased resources to support greater stakeholder outreach in the Standards information function;
- dedicated support for standards database development and maintenance in support of the ERO compliance and standards information system; and
- additional project management support for North American, standards development activity.

[State generally whether there are anticipated Regional and/or Industry resource impacts associated with this assumption in 2012 or later in the planning period 2013-15]

COMPLIANCE MONITORING AND ENFORCEMENT AND ORGANIZATION REGISTRATION AND CERTIFICATION PROGRAM

1. Assumptions with respect to highly specialized technical resource requirements associated with compliance monitoring and enforcement of critical infrastructure standards are addressed under the Critical Infrastructure Protection Program Area.

2. [Need to decide whether TFE resource assumptions should be moved up to this section or left in CIP, where they are now]

3. The number of interpretation and guidance requests is assumed to remain constant in the near term as CANs, case notes and industry-trial implementation periods provide alternatives to formal interpretation requests.

4. Continue refinement of risk-based methodologies to support more effective and efficient compliance monitoring activities such as; appropriately focused Annual Implementation Plan and Actively Monitored List (AML), audit scoping and various enforcement activities. [State generally whether there are anticipated NERC, Regional and/or Industry resource impacts associated with this assumption in 2012 or later in the planning period 2013-15]
5. NERC and the Regional Entities will coordinate development of a risk based approach to compliance monitoring. The first step will be to develop appropriate risk profile determination for registered entities as a pilot in 2011 with further expansion throughout the planning period. [Discuss audit observation requirements/approach] [State generally whether there are anticipated NERC, Regional and/or Industry resource impacts associated with this assumption in 2012 or later in the planning period 2013-15]

6. NERC and regional staff will continue to collaborate to define ongoing training needs, priorities and implementation schedules for NERC and Regional Entity auditors, enforcement and investigation staff. The Regional Entities should assume that NERC will include in its budget the cost of these training programs, other than Regional Entity costs (e.g., labor, travel and lodging) to participate and attend.

7. NERC and Regional Entity staff should be provided the time to maintain critical industry certifications, such as NERC System Operator Certification. Additionally blending in the appropriate audit and investigative skills must be provided. Budgets and long term work plans should reflect recertification and training time for NERC and Regional Entity staff.

8. NERC will conduct semi-annual three day ERO auditor workshops to provide auditors with updates on compliance policies, actions and requirements in order to promote consistency of audit practices and procedures. Goal is to have at 100% of auditors, including CIP auditors as their schedules permit, attend at least one of the semiannual three day workshops which will be scheduled for the third week of February and September. The Regional Entities should assume that NERC will be responsible for the cost of these training programs, other than Regional Entity costs (e.g., labor, travel and lodging) to attend.

9. Increase the number of spot checks over the next three years in conjunction with a risk-based approach to compliance monitoring. While this will initially increase auditor preparation time and resources, appropriately scoped audits based on entity risk and performance profiles should lead to efficiencies in the audit program. Notwithstanding these improvements in efficiency Regional Entities may be required to increase their audit resources in the near term.

10. Audits, which will continue under a schedule to complete BA, TOP, and RC audits each three years and other entities each six years in the first few years of the planning period, will transition to a periodicity more reflective of the risk profile of registered entities as the planning period progresses. Compliance monitoring -will be based on a risk and performance review of the individual entity; where necessary audits will have an increase in depth and complexity, including an increased number of unscheduled audits or spot checks. While some audits will be more in-depth and of greater complexity, other audits may require
less resources based on the risk and performance based assessment of each entity and all audits will become more focused and perhaps reduced in scope. Regional Entities may nevertheless find it necessary to increase their audit resources to satisfy these workload requirements. It is reasonable to expect that entities having a higher risk profile will be audited more often, while those with a lower one will be subjected to audits more infrequently.

11. Changes to the Rules of Procedures affecting the Compliance Monitoring and Enforcement Program will continue to be made as appropriate in order to enhance efficiency in compliance operations and enforcement. However, it is not possible at this time to predict the impact of these yet to be identified improvements on the need for further resource additions in the ERO compliance and enforcement areas.

12. In addition to the regular schedule of workshops and other communications, NERC and Regional Entities will also continue to collaborate and provide special industry communications, focusing on both the most-violated, as well as recently adopted, standards and those most critical to reliability. [State generally whether there are anticipated NERC and/or Regional resource impacts associated with this assumption in 2012 or later in the planning period 2013-15].

13. NERC and the Regional Entities compliance and standards program area management will work collaboratively to provide more compliance guidance to support industry’s efforts to achieve compliance prior to the effective date of new and revised standards. This increased collaboration is expected to mitigate the need for additional resources to support compliance application notices. However additional resources are required at NERC in the near term to support dedicated compliance input to standards and conduct field testing of standards approved by the NERC BOT or approved by FERC and still in the implementation phase.

14. NERC and Regional Entities will coordinate and expand registered entity training in the application of reliability standards in order to better prepare registered entities, improve compliance and reduce the number of erroneous self reports and self-certifications. NERC’s compliance program area will require resource additions in 2012 to provide more input and support to facilitate standards development and forward looking guidance to assist industry in meeting compliance deadlines. These additional resources will also be used to conduct webinars of revised and new standards’ implementation plans. [Regional resource impacts?]

15. NERC and Regional Entities will refine audit guidance for the new MOD Reliability Standards. NERC and Regional entity compliance staffs will need to conduct semiannual workshops to improve guidance and instruction on the MOD standards in 2012 and 2013. Given the complexity and number of number of standards and requirements NERC will require additional resources in the near term to develop guidance and training to industry on MOD standards. These additional resources will also consider linkages between the modeling and planning standards to
assist NERC and the Regional Entities in providing overall compliance guidance. [Any regional resource impacts associated with this assumption?]

16. NERC estimates that, with the introduction of a robust, registered entity focused Events Analysis process, 15 CI’s per year are probable. [State generally whether there are anticipated NERC and/or Regional resource impacts associated with this assumption in 2012 or later in the planning period 2013-15]

ENFORCEMENT

1. NERC and the Regional Entities will continue to establish streamlined mechanisms to expedite the disposition of minor, administrative violations and look to gain more discretion to handle minor violations before they enter the enforcement process. [State generally whether there are anticipated NERC and/or Regional resource impacts associated with this assumption in 2012 or later in the planning period 2013-15]

2. [NERC? Regional? Or both?] Resources will be required to develop and implement an enforcement process that encourages “good” self-reporting, one that results from a systematic compliance “culture” to detect, report, and correct problems, obtains adequate recognition in the enforcement processes.

3. Follow-up to NERC’s education of the industry on lessons learned from violations that pose the most risk to the bulk electric system with “targeted aggressive enforcement” for further instances of non-compliance. [NERC and Regional resource implications/impacts?]

4. The current trend of alleged violations is expected to continue during the planning period. [NERC and Regional resource impacts?]

5. NERC and Regions will strive to achieve a 12 month total average processing time for alleged violations over the planning period. [NERC and Regional resource impacts?]

REGISTRATION

1. The number of registered entity functions may increase as a result of the possible expansion of the Bulk Electric System definition. However, this may be mitigated (in part) through increases in joint registration and the application of the Multi-Region Register Entity (MRRE) process, alleviating the need for resource additions.

2. It is assumed that a uniform BES definition will be implemented in 2012 and it will result in increased workload for the Regions as they deal with exclusion requests in 2012 and 2013. The program area resource impacts will vary by Regional Entity, as will the Program Area under which this work is performed.
3. NERC does not expect significant number of registration challenges, with efforts in registration focusing on refining the current registries across the Regional Entities.

4. The number of certifications of BA, RC and TOP may increase as entities adjust footprints and responsibilities. At present no major additional resources are envisioned.

5. The number of Joint Registration Organization and Coordinated Functional Registrations will likely increase as entities better delineate shared responsibilities and seek to achieve efficiency and effectiveness through better alignment of responsibilities and compliance liabilities.

6. Over the planning period, NERC will review its registration criteria to enhance its joint and coordinated functional registration to better approximate registration by requirement or by asset.

**RELIABILITY ASSESSMENT AND PERFORMANCE ANALYSIS PROGRAM**

1. NERC will continue to incrementally improve the definitions, refine data reporting requirements from registered entities, and review adequate level of reliability related metrics used in reliability assessments.

2. NERC and Regional Entities will gather data or perform analysis in support of U.S. Federal or Canadian Provincial initiatives. For example, the following reliability considerations are being or may be reviewed:
   a. high impact/low frequency events such as geomagnetic disturbances
   b. system frequency response analysis
   c. climate change
   d. environmental regulations
   e. New technology integration such as renewable energy, smart grid, energy storage, and/or electric vehicles

3. Generator Availability Data System (GADS) collection, which becomes mandatory in 2012, will require Regional Entity resources to support it, similar to the current TADS process. NERC will provide industry training regarding the mandatory submittal of GADS data. Additionally, NERC staff will be required to provide both administrative and analysis support to the GADS system.

4. NERC and the Regional Entities will continue to provide independent reviews of assessments to assure a high level of technical rigor.

5. NERC will continue to develop analysis of TADS data in 2012. Additionally, NERC staff will be required to provide both administrative and analysis support
to the TADS system, resulting in an annual report assessing trends once sufficient data is collected.

6. To meet NERC’s Three-Year Assessment commitments, NERC will continue to:
   a. Vet proposed and future metric development, collection, and analysis with industry stakeholders through the Reliability Metrics Working Group (RMWG).
   b. Identify and spotlight trends through assessments of the availability data systems and metrics (e.g., TADS, GADS, TADS, reliability metrics, etc.)
   c. Two limited focus post-seasonal overviews will be completed annually (Summer and Winter). NERC and the Regional Entities will prioritize and budget for two reliability assessment initiatives (scenario and special reliability assessments) per year. Specialized contractors may be used to complete detailed analysis to support scenario assessments. Three special assessments are currently scheduled to be completed between 2011 and 2014 (change in resource mix, gas dependency, delays in transmission development).

7. To meet NERC’s Three-Year Assessment commitments, NERC may be required to add resources to:
   a. Quarterly updates of metric analysis results through NERC’s website, NERC News, and via Webinars and an annual report assessing the State-of-Reliability in North America based on this analysis.
   b. Develop a centralized data collection, reporting and validation process, and calculation tools in 2012 and beyond for reliability assessments, metric development and availability data systems such as GADS and Spare Equipment Database.
      i. Develop integrated database to support the collection, validation, and distribution of reliability assessment information including generation, transmission, and demand data in 2011 through 2012. NERC may need to develop information system enhancements for the Regional Entities to support automation. The requirements for any such enhancement at NERC would be developed by the RAPA Program Area, procured by the NERC’s IT department and budgeted as a RAPA Program area cost. [Regional impacts?]
      ii. Support increased coordination and data collection, analysis to support tracking and data analysis to calculate associated risks to reliability identified in future NERC alerts (advisory, recommendations, and essential actions).
   c. Increased coordination with event analysis, lesson learned and model validation activities. Specialized contractors may be used to complete detailed analysis to support model data collection and validation.
d. Complete work plans supporting reliability assessment and input into NERC’s reliability standards process for technology integration and high-impact, low-frequency event risks.

i. NERC will implement probabilistic assessments into the Long-Term Reliability Assessment with a trial run in 2012. A common set of probabilistic reliability indices and probabilistic-based work products will be used to supplement the NERC’s Long-Term Reliability Assessment. Information system enhancements and modeling support may be required by Regional Entities to support this effort.

ii. Energy and high-risk hours analysis to be included in seasonal and long term reliability assessments to supplement capacity assessment with trials in 2013.

**TRAINING, EDUCATION, AND OPERATOR CERTIFICATION PROGRAM**

1. NERC and the Regional Entities will coordinate the delivery of educational materials to registered entities through NERC’s development and implementation of a centralized, robust learning management system (LMS). The LMS is expected to provide standards technical guidance, compliance guidance, lessons learned, examples of excellence, best practices, alerts, and other technical resource information. To maintain support for this system, NERC will require the addition of staff.

2. In 2012, NERC and the Regional Entities will begin to implement a compliance auditor training program that will require staff and contractor resources to implement. The priority of implementing training programs for additional technical functions (i.e. CIP Auditors, Investigators, Root Cause Analysts, Training Instructors, etc.) will be determined. NERC and the Regional Entities will continue to support core ERO function training courses (e.g. auditors, root cause analysis, CIP auditing) throughout this development.

3. NERC and the Regional Entities will place priority on developing educational materials for Registered Entities regarding expectations for new and existing reliability standards, and for supporting a culture or reliability excellence.

4. NERC will continue to provide training to NERC and Regional Entity standards development staff and drafting teams on results-based standard development.

5. In 2012, NERC will centralize the coordination and management of all internal and external training. This will include development and management of an overall budget for internal and external training and education activities for all program areas. The functional requirements for particular training and education programs will be developed by the Program Area(s) with the relevant subject
matter expertise (e.g. Standards Program Area for standards training, Compliance Program Area for auditor training, Human Resources department for code of conduct training, etc.) The Training, Education and Operator Certification Program Area will manage and be staffed with resources necessary to support the organization, planning and execution of, and registration for, specific training activities within the parameters of the overall training and education budget, with individual program areas providing subject matters experts as required in support of particular activities. The applicable portion of the overall budgets, as well as costs, associated with specific program area training (e.g. standards, compliance, etc.) will continue to be allocated and charged to those program areas (e.g. standards training costs will be reflected in the standards budget, compliance training in the compliance budget, etc.). Operator training and certification programs will continue to be organized, managed, budgeted and funded consistent with the requirements of the rules of procedure. Additional resources requirements will be needed at NERC in 2012 to implement this approach and support Program Area training activities. Notwithstanding these resource additions, the centralized management of these activities is expected to enhance overall coordination, efficiency and quality of training and education activities.

6. Each Regional Entity will host a minimum of two different compliance workshops each year.

7. NERC standards and compliance staff will conduct at least one joint workshop for industry each year; focusing on inter-relationships and feedback mechanisms.

8. In the case of NERC, the incremental costs of hosting workshops and other educational activities where stakeholders attend in person will be recovered through attendance fees in most cases.

9. NERC will contract for professional training for NERC and Regional Entity staffs to improve their effectiveness, including training in facilitation, negotiation, project management, and leadership.

10. No significant changes are expected in system operator certification CEH requirements through 2013.

**SITUATION AWARENESS AND INFRASTRUCTURE SECURITY PROGRAM**

1. NERC and the Regional Entities will continue to evaluate and coordinate their differing and complementary roles in CIP and Situation Awareness for budgeting and/or operational purposes.
2. During 2011 NERC made a significant investment to support the implementation of a situation awareness tool for FERC, NERC, and Regional Entities. NERC will incur ongoing licensing, maintenance, and support services fees for SAFNR within its budget and may seek FERC funding support. [Need to discuss RC requirements, cost impacts, concerns][Need to discuss specific expectations and requirements with respect to Canadian RCs]

3. NERC will fund and implement a new alerts system in 2012 that provides increased functionality to satisfy NERC’s business needs in alerts development and processing and ensure the alerts are issued to the appropriate parties.

4. During 2012, NERC will continue to undertake significant activities and funding to facilitate third party development and management of North American Phasor Concentration System (“NASCON”) software and regional node communication integration. Commencing in 2013, NERC anticipates a reduced need for a direct NERC funding role related to NASPI development, with any NERC funding tied to NERC’s internal situation awareness capabilities.

5. NERC will evaluate and implement steps during the 2012-14 to transfer some or all of its reliability tools and functions to third parties, including but not necessarily limited to the Interchange Distribution Calculator and [list other potentially affected tools]. One of the key challenges continues to be the development of an alternative funding mechanism with the users of the tools providing direct funding for the development, operation, and maintenance of the tools. Prior to implementation of these steps NERC will seek input from the Regional Entities, appropriate NERC committees and working groups, and other affected parties.

CRITICAL INFRASTRUCTURE PROTECTION

Major incidents, events, threats, and vulnerabilities will result in re-prioritization of CIP initiatives through 2015. [State generally whether there are anticipated NERC and/or Regional resource impacts associated with this assumption in 2012 or later in the planning period 2013-15].

1. NERC’s Critical Infrastructure Protection Program Area will have responsibility for the identification and management of the specialized critical infrastructure protection resources needed to support overall ERO CIP goals and objectives, as well as the specialized CIP resources needs of the other program areas (e.g. Standards, Compliance, Situation Awareness)
2. NERC and the Regional Entities will face increased competition in attracting well-qualified staff to address expanding CIP challenges, particularly in cyber security.

3. CIP activities will continue to increase significantly across the electricity sector. Risk analysis, incident response, CIP compliance requirements, information sharing and intelligence, CIP standards oversight, security training and awareness, and other functions are expected to increase in NERC CIP resource requirements throughout the planning period. In light of these resources pressures, throughout the planning period, NERC and Regional Entities will need to establish strategic priorities and CIP resource allocations to support those priorities.

4. NERC will strengthen CIP partnership with U.S. and Canadian Government authorities to facilitate two-way information exchanges that enhance and expand knowledge of critical infrastructure threats and risk. NERC will promote CIP incident reporting and work with the Regional Entities to conduct security event and incident analysis and improve security practices in conjunction with the ES-ISAC.

5. The Technical Feasibility Exception (TFE) program will continue to require significant staffing resources within NERC and across the industry as Regional Entities perform reviews and gauge compensating measures. TFE development, review and approval will result in additional compensating measure validation checks, quarterly reporting tracking, and change management. Experiences gained through existing operations will be utilized to guide the development of resource recommendations.

6. Staff resources necessary to effectively conduct industry-wide CIP audits will continue to be a challenge. There are too few auditors with the necessary skill and experience to monitor compliance with all CIP requirements. Active training and recruitment will be critical to success of the ERO CIP audit program.

7. The new CIP-002 V4 standard is expected to result in a substantial increase in the number of entities and critical assets required to be monitored for CIP compliance in 2012-2015.

8. NERC and the Regional Entities will develop and support a training and implementation program for registered entities to successfully implement CIP-002 V4. The training and implementation program will be based on a well developed audit plan and provide technical application guidance.

9. NERC will develop a robust ES-ISAC and Threat and Vulnerability Management Program (TVMP) with the following organic capabilities:
a. Bi-directional sharing of sanitized information and other intelligence products with government and federal law enforcement agencies;

b. A secure communications portal for information sharing with electricity sector stakeholders;

c. ERO-wide visibility and situational awareness of network infrastructure to monitor for cybersecurity threats and identify ICS/EMS/SCADA control system protocols and signature vulnerabilities and provide reporting to potentially affected entities in near real time;

d. Industry-wide awareness of emerging threats and risks;

e. Security incident analysis and lessons-learned that enhance the electricity sector security posture.

10. More comprehensive understanding of confidential and time sensitive standards development processes is necessary. In the event of a national security emergency the NERC Board may direct development of a standard in response to the emergency that is deemed confidential with information that can only be shared on a “need to know” basis. This will require resources to develop an infrastructure capable of accommodating these obligations.

11. The Cyber Risk Preparedness Assessment (CRPA) program is designed to assess the current cyber resiliency capabilities of BPS entities and the adequacy of existing reliability mechanisms related to the highly unique nature of cyber threats. This sustaining program is a valuable resource to both NERC and industry and is expected to expand considerably through 2015 as more entities take advantage of the opportunity provided by the CRPA experience.

12. [The NERC Sufficiency Review Program will be re-architected to address CIP-002v4]

13. NERC will collaborate with governmental organizations including federal agencies, law enforcement, and DOE national laboratories to:

   a. develop case studies at government determined critical facilities to further understanding regarding requirements for “flow of power.”

   b. develop certification guidelines for the Smart Grid Cybersecurity Operator.

   c. partner with the Industrial Control Systems Cyber Emergency Response Team (ICS-CERT) to share threat, vulnerability, and security incident information.

   d. investigate benchmarking of vendor products and systems that improve cybersecurity protection.

   e. develop joint security Advisory products
f. develop a comprehensive Cybersecurity Risk Management Process Guideline for the enterprise electricity sector
g. integrate security event analysis from government agencies and national laboratories.

14. The ERO will implement requirements of the ESCC Roadmap and Coordinated Action Plan in coordination with the Critical Infrastructure Protection Committee (CIPC) and industry volunteers to support the:

   a. Severe Impact Resilience Task Force (SIR TF)
   b. Cyber Attack Task Force (CA TF)
   c. Smart Grid/Cyber Security Task Force (SGCS TF)
   d. GeoMagnetic Disturbance Task Force (GMD TF)
   e. Spare Equipment Database Task Force (SED TF)
   f. NERC Crisis Response Plan

15. CIP Compliance Application Notice guidance is expected to be provided in greater volume and with increased frequency to registered entities.

16. National level security exercises will be conducted to examine industry’s cybersecurity and physical security preparedness and response capabilities through simulation of coordinated cyber and physical attacks on industrial control system, SCADA, and information technology assets.

17. NERC will develop comprehensive cyber security training program that validates knowledge and technical competency.

**Events Analysis and Investigations**

1. NERC and the Regional Entities will define clear, uniform criteria/ranking for reporting and categorizing of system events and security incidents.
2. NERC and the Regional Entities will work together to develop joint processes and resourcing for triage, analysis, and reporting of system events to the regulators and will coordinate with regulators regarding these issues.
3. NERC and the Regional Entities will provide timely publication of lessons learned and recommendations and track responses to recommendations.
4. NERC and the Regional Entities will refine the criteria and process to require prompt and complete self-analysis of events and disturbances to promote continuous improvement and information sharing.

5. NERC will work with the Regional Entities to develop and provide root cause analysis training for NERC, Regional Entity staffs and the industry at large and subject matter experts who participate in event analysis and investigation teams.

6. The number of events requiring review and analysis will increase, with approximately 175 of those events qualify for review per year. The heavy lifting for review of these events will be at the registered entity and Regional Entity levels – they will need to be logged and tracked and reviewed by NERC and regional staff to verify that all parts of the review are completed, including compliance reviews.

7. NERC and the Regional Entities will work together to streamline and improve the speed of compliance investigations and look for ways to establish meaningful linkages to event and disturbance analysis. The Events Analysis process will incorporate a compliance evaluation review of selected category 1 events and all events Category 2 and above. [WECC comment: needs to better account for flexibility, discretion or prioritizing. Not clear last sentence needs to be in this document]

CORPORATE SUPPORT FUNCTIONS

1. In 2012, NERC will establish an ERO-wide risk assessment framework. This function will include internal audit capabilities with respect to NERC’s compliance with the Rule of Procedure and other legal requirements, as well as the compliance by Regional Entities with the Regional Delegation Agreement. This framework will also address the roles and responsibilities of the NERC Board of Trustees, Board committees and the various standing committees.

2. NERC and the Regional Entities will continue to work collaboratively to improve the efficiency and effectiveness of ERO processes, taking into consideration the results and recommendations of NERC’s business process improvement initiative.

3. As part of its business process initiative, NERC is conducting a detailed and structured assessment of the technology platforms that support each of the major business processes including such factors as the inventory of users, capability of the tools for supporting the existing processes, opportunities to enhance program and process efficiency, the cross-process support provided by the tools, the support provided by the tools for regional entity and other stakeholder input processes, etc. NERC will seek input and feedback from the Regional Entities as part of this initiative. The intent of this assessment is to establish a baseline view
of the tools and capabilities that are available to support NERC and ERO business process needs, as well as identify the IT needs that are not being met by the existing infrastructure that could be satisfied with other tools, such as SharePoint. Taking into consideration the outputs of this initiative, NERC and the Regional Entities will collaborate to develop and implement the most effective and efficient protocols and tools for the exchange of data and information between and among the Regions and NERC while optimizing organizational efficiencies as contemplated by the delegation agreements. Funding responsibility will be addressed based on specific organizational needs taking into account agreed upon common objectives and requirements for the applicable budget year.

4. NERC and the Regional Entities will continue to make improvements to their individual and collective business planning and budgeting processes, as well as cash flow forecasting and budget management practices.

5. NERC and the Regional Entities will maximize the cost effective use of conferencing facilities for hosting ERO meetings and conferences.

6. NERC and the Regional Entities will work together to evaluate and implement, where practical, joint purchasing activities and cost control measures to reduce costs of materials and supplies, as well as explore whether there are opportunities to use our combined purchasing power to lower health care, insurance, communications, travel, hotel, meeting and conference, and other common operating expenses.

7. NERC and the Regional Entities will continue to maintain reserves and/or lines of credit to assure adequate funding resources, including the ability to request supplemental funding, for extended, major investigations and contested proceedings. NERC and the Regional Entities should plan to have short-term and intermediate term internal means to handle funding of hearings to permit effective due process for registered entities.

8. NERC and the Regional Entities will continue to face challenges and will require resources and programs to support the hiring and retention of qualified personnel.

9. Increased support services resources may be required to facilitate and support operations requirements and achievement of objectives.

10. Technology (software and hardware) investments will be required to support accounting, human resources and communications requirements and objectives.

11. Health care premiums, liability insurance and leasehold operating costs will likely continue to increase during the planning period.
Colleagues,

Per our discussion today, attached is the current version of the Business Plan & Budget Assumptions document from last Friday’s meeting.

Herb Schrayshuen
Vice President and Director Standards
North American Electric Reliability Corporation
Herb.Schrayshuen@nerc.net
315 439 1390

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Attached revision marked against clean version based on this afternoon’s EROEMG call. Note there are a number of items which are still open which I highlighted in yellow. I can delete the placeholders for discussions of resource impacts if necessary but given the purpose of this document it would be good to address resource impacts generally for the items noted.

Attached is a revised version of the common business plan and budget assumptions document.
This document is marked against the version Tim forward in the e mail below and reflects the follow up discussions that Ed, Jennifer, Tom, Herb, Mark Weatherford and I had yesterday. I’ve also attached a clean version. This will be reviewed at today’s ERO EMG meeting.

I may have gone overboard in the recipients of this e mail and apologize for those getting it twice, but I wanted to err on the side of making sure everyone was kept in the loop.

If anyone wishes to provide comments it would be most helpful if you could provide these on the clean version using track changes. It would also be helpful if I only got one set of comments per organization. Ongoing efforts by the Regional Entities to provide a consolidated set of comments are greatly appreciated. Any comments by NERC staff members receiving this should be sent to the head of their Program Area for review and, if appropriate, forwarding to me.

The document could still use improvement and streamlining but it continues to be an improvement over last year. We can continue to refine it as we move through the BP&B process, but I’d like to have it in final form, subject to any fine tuning, by next week.

Please keep in mind that the purpose of this document is to be used to determine resource requirements over the stated planning period, with the resource requirements being set forth in the 2012 BP&B for each entity, including each entity’s 3 year budget forecast. Accordingly you will note a number of areas where I inserted a question regarding what the resource implications are with respect to that assumption. We aren’t looking for numbers in this document but everyone needs to be thinking about a 3 year budget forecast since that will be a requirement of this year’s BP&B filing. We haven’t specifically discussed the format for those forecasts among the ERO finance group but I suggest we all follow the form of the one page spreadsheet containing NERC’s 3 year projection which was included in NERC’s 2011 BP&B and which I have sent to the Regional finance representatives. You can also include text in your BP&B putting whatever caveats you think appropriate around your projections for 2013 and 2014 given that they are not being submitted for approval and are preliminary in nature.

Thanks for everyone’s efforts on this.

From: tim.gallagher@rfirst.org [mailto:tim.gallagher@rfirst.org]
Sent: Wednesday, March 09, 2011 9:18 AM
To: Michael Walker; Dave Nevius
Cc: patty.tymcio@rfirst.org; Larry.Grimm@TEXASRE.org; DP.Skaar@MidwestReliability.org; srrogers@frcc.com; sdochoda@spp.org; eschwerdt@npcc.org; shenry@serc1.org; mark@wecc.biz; cwhite@wecc.biz
Subject: Consolidated comments of Regions on latest draft BPB assumptions

Dear Mike:

I am attaching a consolidated set of comments on your latest version of the draft assumptions for the upcoming BPB document. We were able to make it all the way to the section on Event Analysis. The good news is that during our discussions, there was strong consensus on most every item so when we talk Friday about the last two sections and really, the whole document, I think you will be pleased that you don’t have to deal with divergent opinions. You may still not agree
with us, but at least it is all of us and not some of us!

I understand Ed will be spending some time with you in Phx and he can help explain things should you have questions.

I want to express my thanks to my colleagues for hustling up to get this done and for the excellent collaboration and accommodation as we came to agreement on the comments.

Best Regards,

Tim

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To unsubscribe send a blank email to leave-1250778-288977.cb82d56c0d8bca40080cbb10c2b1ae69@listserv.nerc.com
Announcement:
NERC Draft 2012 Business Plan and Budget

On Tuesday, May 3, 2011, NERC will conduct a webinar and conference call to provide an overview and summary of the first draft of NERC's 2012 Business Plan and Budget. Materials will be posted and announced in advance of the call. It will be recorded and available on NERC's website after completion for anyone not able to listen in at the scheduled time.

To register for the webinar click here: https://cc.readytalk.com/r/qc29q5dbrpn6

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To unsubscribe send a blank email to leave-1254771-325654.1ca6f85fb1574a8515cc07df72d3bfe0@listserv.nerc.com
Draft
May 2, 2011
2012 Business Plan and Budget
[August] [ ], 2011
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About NERC

Overview
The North American Electric Reliability Corporation (NERC) is a not-for-profit entity organized under the New Jersey Nonprofit Corporation Act. NERC’s mission is to improve and ensure the reliability of the bulk power system in North America. NERC’s area of responsibility spans the continental United States and Canada and the northern portion of Baja California, Mexico. Entities under NERC’s jurisdiction are the users, owners, and operators of the bulk power system - a system that serves the needs of over 334 million people, includes installed electricity production capacity of approximately 1,200 gigawatts, operates 211,000 miles of high voltage transmission, and is comprised of assets worth more than one trillion dollars.

The Federal Energy Regulatory Commission (FERC) certified NERC as the Electric Reliability Organization (ERO) within the United States to establish and enforce reliability standards for the U.S. portion of the bulk power system, pursuant to Section 215 of the Federal Power Act. NERC is subject to regulatory oversight by FERC.

In Canada, NERC presently has memoranda of understanding with provincial authorities in Ontario, New Brunswick, Nova Scotia, Québec, Saskatchewan, and Alberta, and with the National Energy Board of Canada. NERC standards are mandatory and enforceable in Ontario and New Brunswick as a matter of provincial law. NERC has an agreement with Manitoba Hydro, making reliability standards mandatory for that entity, and Manitoba has recently adopted legislation setting out a framework for standards to become mandatory for users, owners, and operators in the province. In addition, NERC has been designated as the “electric reliability organization” under Alberta’s Transportation Regulation, and certain reliability standards have been approved in that jurisdiction; others are pending. NERC and the Northeast Power Coordinating Council (NPCC) have been recognized as standards setting bodies by the Régie de l’énergie of Québec, and Québec has the framework in place for reliability standards to become mandatory. NERC standards are now mandatory in British Columbia. Nova Scotia also has a framework in place for reliability standards to become mandatory and enforceable. NERC is working with the other governmental authorities in Canada to achieve equivalent recognition.

Scope of Responsibilities
As the ERO, NERC’s primary responsibilities are leading the development, improvement, and adoption of reliability standards for the bulk power system in North America and the monitoring, evaluating, and enforcement of compliance with those reliability standards by the approximately 1,900 entities registered with NERC as bulk power system users, owners, and operators. Collectively, these entities perform over 4,600 bulk power system reliability functions. In addition, NERC conducts near-term and long-term assessments of the reliability and future adequacy of the North American bulk power system; certifies bulk power system operators as having and maintaining the necessary knowledge and skills to perform their reliability responsibilities; maintains situational awareness of events and conditions that may
threaten the reliability of the bulk power system; coordinates efforts to improve physical and cyber security for the bulk power system of North America as it relates to reliability; and conducts detailed analyses and investigations of system disturbances and unusual events to determine root causes, uncover lessons learned, and issue relevant findings as advisories, recommendations, and essential actions to the industry. All of these activities serve the broad public purpose of helping to improve and ensure the reliability of the bulk power system.

Membership and Governance
Membership in NERC is open to any person or entity that has an interest in the reliability of the North American bulk power system. Membership in NERC is voluntary and affords participants the opportunity to engage in the governance of the organization through election to the Member Representatives Committee. The number of entities and individuals who are members is nearly 700. Membership in NERC qualifies organizations and individuals for election to NERC’s Member Representatives Committee.

A twelve-member Board of Trustees governs NERC (11 independent directors plus the CEO serving as the management trustee). The board has formed several committees to facilitate its oversight of the organization in the areas of finance and audit, governance and human resources, compliance, standards oversight and technology, and nominations. The board also oversees NERC’s technical committees of industry volunteers in the areas of operations, planning, critical infrastructure protection, standards, compliance and certification, and personnel certification.

NERC’s Member Representatives Committee comprises 28 voting representatives elected from the 12 membership sectors. The Member Representatives Committee elects the independent trustees, along with the board votes on amendments to the Bylaws, and provides policy advice and recommendations to the board on behalf of stakeholders with respect to annual budgets, business plans, and other matters pertinent to the purpose and operations of the organization.

Delegated Authorities
In executing a portion of its responsibilities, NERC delegates authority to Regional Entities to perform certain functions through delegation agreements. FERC has approved delegation agreements between NERC and eight Regional Entities (Florida Reliability Coordinating Council, Midwest Reliability Organization, Northeast Power Coordinating Council, Inc., ReliabilityFirst Corporation, SERC Reliability Corporation, Southwest Power Pool, RE, Texas Reliability Entity, Inc. and the Western Electricity Coordinating Council). These delegation agreements describe the authority delegated to the Regional Entities in the United States to propose and enforce reliability standards within their geographic footprints. NERC expects Regional Entities whose territories extend into Canada and Mexico to perform equivalent functions in those jurisdictions. During 2010, NERC and the Regional Entities negotiated and the FERC approved amendments to these delegation agreements to improve the efficiency, transparency, quality and effectiveness of the combined NERC and Regional Entity operations. NERC and the Regional Entities are currently working on the development of metrics to measure and track key elements of NERC and Regional Entity performance.
Funding

Section 215 of the Federal Power Act and FERC regulations also specify procedures for NERC’s funding in the United States. NERC prepares an annual business plan and budget, which is subject to FERC approval in the United States. Once approved, assessments are allocated to load-serving entities on a net energy for load (NEL) basis. Equivalent funding mechanisms are provided in Canada subject to the specific laws and regulations of each province.

The funding requirements for each Regional Entity are addressed separately in each Regional Entity’s business plan and budget, which must be reviewed and approved by NERC and applicable regulatory authorities.
Introduction and Executive Summary

NERC’s mission is to improve and ensure the reliability of the bulk power system of North America. NERC furthers this mission by facilitating industry awareness and management of risks to reliability; developing clear, reliability-focused standards; promoting compliance excellence with its reliability standards; assessing and reporting on existing and future reliability performance; analyzing and reporting on system events to identify and share lessons learned; and providing firm but fair enforcement of compliance with mandatory reliability standards.

NERC has accomplished many things in the short time period since being designated as the ERO by FERC, as recognized in the FERC’s acceptance of the performance assessment of NERC as the ERO, and finding that NERC, working with the Regional Entities, continues to satisfy statutory and regulatory criteria for certification and highlighting the significant progress that NERC and the Regional Entities have made in transitioning from a voluntary reliability program to

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**Goals, Priority Deliverables and Challenges**

NERC’s mission is to improve and ensure the reliability of the bulk power system of North America. NERC furthers this mission by facilitating industry awareness and management of risks to reliability; developing clear, reliability-focused standards; promoting compliance excellence with its reliability standards; assessing and reporting on existing and future reliability performance; analyzing and reporting on system events to identify and share lessons learned; and providing firm but fair enforcement of compliance with mandatory reliability standards.

NERC has accomplished many things in the short time period since being designated as the ERO by FERC, as recognized in the FERC’s acceptance of the performance assessment of NERC as the ERO, and finding that NERC, working with the Regional Entities, continues to satisfy statutory and regulatory criteria for certification and highlighting the significant progress that NERC and the Regional Entities have made in transitioning from a voluntary reliability program to
mandatory and enforceable reliability standards, approved by the Commission.\(^1\) NERC’s accomplishments were also appropriately summarized by the Edison Electric Institute in its February 17, 2011 Policy Input Comments to the NERC Board of Trustees:

> “With almost five years experience as the nation’s Electric Reliability Organization, NERC should be proud of its record of achievement. Developing ‘version O’ standards catalog and a process for mandatory reliability standards, standing up a compliance and enforcement program, and seeking generally to transform the historical corporate mission and culture to fit with a federal regulatory oversight role, all are evidence of the strong commitment, dedication, and performance of the entire NERC community; NERC staff, regions, and stakeholders who support NERC and its critical mission to ensure the reliability of the best bulk power system in the world. The broad FERC endorsement of NERC performance in the three-year assessment further reflects that NERC has achieved many significant important milestones.”

NERC acknowledges and appreciates the support it has received from industry, regulatory and governmental authorities, and numerous other stakeholders. Designated as the ERO in 2007, NERC continues to evolve and mature as an organization and recognizes that there is considerable work that remains to be done in furtherance of its mission, including, but not limited to, ongoing strategy work and prioritization, improvements in business planning, processes, and execution, including the deployment of technology to effectively support business processes, as well as stakeholder communications, information sharing and support.

As part of the 2011 Business Plan and Budget process, NERC and the Regional Entities took steps to improve their long-term business planning and budgeting processes to provide a more meaningful context to properly evaluate near term resource needs. Rather than focus on the development of a common set of assumptions for just the upcoming year as was the case with the 2010 Business Plan and Budget, NERC and the Regional Entities developed assumptions that they believed would influence resource and funding requirements over a three-year planning horizon. As part of its 2011 Business Plan and Budget, NERC also presented a three-year budget forecast. This forecast reflected significant anticipated increases in resources in 2011 and 2012, followed by a leveling off of incremental resource needs in 2013.

While understandably noting their concerns with NERC’s proposed 2011 budget increase, especially in light of the general state of the economy, stakeholders expressed support for the ERO goals, objectives, and resource requirements, all of which were thereafter filed with and approved as necessary by applicable governmental authorities.

NERC is now in the second year of this three-year plan and its 2012 Business Plan and Budget reflects the resources required for NERC to continue to deliver on its mission. NERC’s 2012 Business Plan and Budget also reflects the ongoing efforts of NERC, as a maturing ERO, to better

\(^{1}\) Order on The Electric Reliability Organization Three-Year Performance Assessment, North American Electric Reliability Corporation, Reliability Standards Development and NERC and NERC and Regional Entity Enforcement, Docket Nos. RR09-7-000 AD10-14-000, September 16, 2010 at pages 1 and 2.
define program area requirements and allocate resources in order to make more meaningful and demonstrable contributions to improvements in the reliability of the bulk power systems in North America.

During the first quarter of 2011, under the leadership of NERC’s president and chief executive officer, the NERC and Regional Entity executive management group devoted considerable time and effort to further improving the ERO business planning and budgeting process, including refining and updating goals, objectives, deliverables, and common multi-year business planning and budgeting assumptions, taking into account lessons learned and stakeholder feedback, as well as applicable governmental requirements and directives. NERC’s Board of Trustees also participated in a strategic planning session, building on input from NERC and the Regional Entity Executive Management Group. Seven goals emerged from this strategic planning initiative including:

- Develop clear, results-based standards
- Promote a culture of industry learning and reliability excellence
- Provide effective measures of reliability risk and performance
- Facilitate effective management of critical infrastructure risks
- Ensure effective and timely compliance enforcement and mitigation
- Provide an efficient and effective ERO enterprise
- Instill a high degree of trust and confidence in the ERO

These goals were also presented to and received the general support of NERC’s Member Representatives Committee, NERC’s technical standing committees, and industry groups. They have also been acknowledged by and received the support of FERC and representatives of other governmental entities and representatives.

In furtherance of these strategic goals, NERC has identified a number of high priority items for 2012 including:

- Issuing new and revised standards, including the development of results-based standards
- Continuing to improve enforcement efficiency and productivity
- Improving and issuing more event analysis and emerging issues reports
- Encouraging additional self-reporting
- Developing and implementing improvements to ERO processes, including the design and deployment of necessary IT infrastructure to facilitate these process improvements, including stakeholder communications, process input and collaboration
- Continuing to improve compliance information and education: Compliance Application Notices (CANs), bulletins and case notes
Advancing the evaluation of the reliability effects of Electromagnetic Pulse (EMP) and geomagnetic disturbance (GMD)

Improving metrics and modeling capabilities

Continuing to support SAFNR and NASPI initiatives

Improvements in training of ERO staff and stakeholders

Improving the ability of industry to respond to incidents, vulnerabilities, and threats that have the potential to affect the bulk power system reliability

As a maturing ERO, NERC, along with the Regional Entities and industry participants in the ERO, continue to face a number of critical challenges and demands as they work to achieve the ERO’s strategic objectives:

- Reprioritizing to focus on reliability risk and delivery of results
- Rising expectations in critical infrastructure
- Addressing regulatory mandates, particularly with respect to improving reliability standards and reducing compliance caseload
- Addressing improvements identified in the three-year assessment of NERC’s performance as the ERO
- Improving business processes in ways that are noticeable and supported by stakeholders, while also maintaining a focus on and managing a significant workload using existing support processes as new processes are developed and integrated
- Balancing resource needs within financial constraints, and achieving efficiencies
- Recruiting, integrating and retaining qualified personnel

2012 Key Assumptions

As mentioned above, NERC and the Regional Entities’ Business Plans and Budgets reflect a set of common assumptions developed jointly by NERC and the Regional Entities as part of the annual business plan and budget process attached as Exhibit A. The significant assumptions underlying NERC’s 2012 Business Plan include:

1. The legal framework under which NERC and the Regional Entities operate will continue;
2. There will be continued industry participation to support key program areas;
3. There will be increased workload and therefore an increased need for improved resource planning coordination between and among NERC committees, as well as between NERC management and the leadership of these committees, as well as with Regional Entities;
4. Cyber and critical asset security will continue to be a priority in the United States and Canada;
5. Continued refinement of risk based methodologies to support more effective and
efficient compliance monitoring will mitigate compliance resource needs;
6. The frequency of compliance audits will transition to be more reflective of a registered
entity’s reliability risk profile;
7. Current trends in the number of new alleged standards violations each month will
continue, e.g. violations of Order 693 standards gradually trending downward and
violations of cyber security standards continuing to increase;
8. A uniform Bulk Electric System (BES) definition will be implemented in 2012;
9. Registration challenges will not increase significantly;
10. The Generator Availability Data System and Spare Equipment Database will become
mandatory in 2012; and
11. The number of events requiring review and analysis will increase as a result of the
implementation of NERC’s new event analysis procedure, which will require NERC
review and feedback as necessary notwithstanding the new procedure’s goal of
increasing registered entity self analysis.

2012 Key Deliverables
Consistent with the list of high priority items emerging from its strategic planning initiative, the
following is the list of significant deliverables which NERC is targeting for 2012:

**Reliability Standards**
- Obtain board approval of a report on the adequate level of reliability of the bulk power
  system
- Increase the number of new, substantively revised or retired standards, including those
developed through the use of expedited processes
- Further reduce the backlog of standards related directives
- Working with applicable NERC committees, develop a plan and procedures for piloting a
  compliance trial period applicable to new standards
- Provide supplemental reference guides and supporting compliance information to guide
  implementation of new and revised standards
- Make recommendations for additional program area improvements based on findings in
  annual risk assessment report
- Ensure the standards work plan reflects review of reliability priorities

**Compliance**
- Risk-based prioritization and methods for focusing compliance monitoring on critical
  standards and at-risk entities are fully adopted
- Ongoing reductions in duration of active caseload
Introduction and Executive Summary

- Reduction in the time period required to verify closure of mitigation plans
- Improved organization registration procedures
Event Analysis
- Increased number of self-assessments by registered entities, together with increased percentage acceptance of initial submittals by NERC
- Closeout and finalization of review of all events from 2009 and 2010
- Increased issuance of alerts, as well as better systems and processes to issue and track alerts

Reliability Assessments
- Assessment of the reliability affects of EMP and GMD using the GMD scenario outlined in the Electricity Sub-Sector Coordinating Council (ESCC) Critical Infrastructure Protection Strategic Roadmap and the related technical committees’ Critical Infrastructure Protection Strategic Initiatives Coordinated Action Plan
- Improved reliability data management, modeling, and programming capabilities

Situation Awareness
- Improve ES-ISAC capabilities, including the development of a secure portal for communication of sensitive information with industry and governmental authorities

Critical Infrastructure Protection
- Prepare a cyber security national response plan and conducting a national cyber security exercise
- Complete version 5 of CIP standards addressing FERC directives

Information Technology
- Deployment of ERO information systems and related technologies which are responsive to ERO business requirements, regional entity, and stakeholder needs

Training and Education
- Deliver additional staff and standards drafting teams training on development of results-based standards
- Through engagement of standing committees’ expertise, issuance of white papers to assist in developing the technical basis for reliability standards
- More robust training opportunities through improved NERC website functionality, webinars, and workshops
- Increased issuance of lessons learned
- Increased training of ERO staff on event forensics and root cause analysis
- Additional internal and stakeholder Critical Infrastructure Protection training
Overview of Funding Requirements
The following sections of the 2012 Business Plan and Budget describe in detail the resources needed in 2012 for NERC to continue to carry out its obligations and address the many challenges it faces as the ERO. The 2012 funding requirements reflect the costs of ongoing operations, including those resulting from 2011 personnel additions and infrastructure investments. Incremental funding requirements in 2012 are primarily driven by resources required to strengthen standards development capabilities, increase compliance processing efficiency, and fund investments in technology to facilitate improved business processes. The 2012 funding requirements for these items are partially offset by savings realized from the completion, elimination, or reduction in the scope of various other program area initiatives.

Overall, NERC is projecting an increase in total operating expenses and capital expenditures of approximately $7.9M, or approximately 16.1 percent, over 2011. This compares to an increase of approximately $10.3 M or an increase of 26.7 percent in 2011 operating expenses and capital expenditures compared to 2010. Total 2012 projected operating expenses and capital expenditures are also approximately $1M or 1.8 percent below the 2012 projection contained in NERC’s 2011 Business Plan and Budget. Total 2012 funding requirements are projected to increase approximately $2.9M, or 5.4 percent, over 2011.

[In Draft 2 we plan to insert a graph showing progress relative to three-year projection contained in 2011 Business Plan and Budget.]

Background
Building on the 2011 business planning initiatives and taking into account feedback from stakeholders, the first step NERC took in preparing its 2012 budget was to undertake a comprehensive review of existing resource allocation to ensure alignment with the ERO’s strategic goals and objectives. Departmental staffing, consulting, and contractor costs were also thoroughly reviewed, as were travel and meeting expenses and other operating costs. During 2011, NERC management also implemented a new employee performance management program to better align individual and departmental performance with corporate goals and objectives. This process, which has now been institutionalized, also provided and will continue to provide an opportunity to better evaluate and address weaknesses within existing resource capabilities.

Cost of Current Operations
After completing its comprehensive review of existing staffing, management reviewed the costs associated with existing operations, including opportunities to reduce contractor, consulting and other operating expenses. Similar to the budget presentation format used in 2011, the costs associated with NERC’s existing operations are referred to as NERC’s “base operating budget”. The base operating budget excludes funding requirements for working capital reserves. The 2011 base operating budget is approximately $48.7M. The projected 2012 base

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2 At this time and as further described herein, based on its preliminary year-end forecast, NERC is not anticipating increasing funding for working capital reserves. This assumption will be subject to ongoing review during the budget finalization process as NERC further updates its year-end working capital forecast.
operating budget is approximately $49.7M, representing a projected increase of approximately $1M or two percent. This compares to a base operating cost increase of approximately 6.1 percent in 2011 compared to 2010.

The 2012 increase in base operating costs includes an increase of approximately $1.3M in personnel costs (wages, payroll taxes, health care, and other benefits), which is primarily driven by the increased level of staffing from the prior budget period and compares to an increase of approximately $3.4M in 2011. The increase in personnel costs was offset by a reduction of approximately $1.1M in existing consulting and contractor costs as a result of completion or elimination of various projects, as well as the assumption of greater workload by NERC staff. Meeting and travel costs are projected to remain relatively flat in 2012, with some increase in the projected use and associated cost of teleconferencing and web-based meetings, which helps hold down travel related expenses. Spending for capitalized computers, software, equipment, and furniture is projected to decrease as a result of the completion of various infrastructure projects.

The 2012 base operating budget reflects increased rent expense due to the leasing of office space needed to accommodate existing and future staffing needs, as well as short-term costs associated with existing leases as NERC transitions to its new headquarters in Atlanta and a new location in Washington, D.C. given space limitations at its current Washington, D.C. location. The relocation of NERC’s headquarters to Atlanta and the expansion of its Washington, D.C. office is part of a comprehensive office relocation strategy adopted in 2010 to improve the long-term efficiency and cost effectiveness of overall ERO operations. This strategy remains on track.

The breakdown of the projected increase in base operating costs is summarized in the following chart.
<table>
<thead>
<tr>
<th>2011 Base Operating Budget</th>
<th>2012 projected change in base operating budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 21,095,939</td>
<td>$ 1,435,532</td>
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<tr>
<td>1,285,299</td>
<td>$ 88,401</td>
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<tr>
<td>3,263,692</td>
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<tr>
<td>2,977,801</td>
<td>179,356</td>
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<tr>
<td><strong>$ 28,622,731</strong></td>
<td><strong>$ 1,363,648</strong></td>
</tr>
<tr>
<td>$ 861,500</td>
<td></td>
</tr>
<tr>
<td>2,635,536</td>
<td></td>
</tr>
<tr>
<td>227,800</td>
<td></td>
</tr>
<tr>
<td><strong>$ 3,724,836</strong></td>
<td><strong>$ (70,500)</strong></td>
</tr>
<tr>
<td>$ 7,137,042</td>
<td>$ (1,144,042)</td>
</tr>
<tr>
<td>300,094</td>
<td>-</td>
</tr>
<tr>
<td>1,901,580</td>
<td>(5,869)</td>
</tr>
<tr>
<td><strong>$ 9,338,716</strong></td>
<td><strong>$ (1,149,911)</strong></td>
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<tr>
<td>$ 1,020,151</td>
<td></td>
</tr>
<tr>
<td>2,420,176</td>
<td></td>
</tr>
<tr>
<td>1,959,854</td>
<td></td>
</tr>
<tr>
<td>4,000</td>
<td></td>
</tr>
<tr>
<td><strong>$ 5,404,182</strong></td>
<td><strong>$ 1,733,870</strong></td>
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<tr>
<td>$ 750,000</td>
<td>(750,000)</td>
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<tr>
<td>$ 845,200</td>
<td></td>
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<td>40,800</td>
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<tr>
<td><strong>$ 886,000</strong></td>
<td><strong>$ (181,110)</strong></td>
</tr>
<tr>
<td>$ 48,726,465</td>
<td>$ (221,910)</td>
</tr>
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</table>

**Total Base Operating Budget $ 1,055,307**
Proposed 2012 Resource Additions and Projected Budget Impacts
After taking into account projected 2011 year-end staffing resources, management prepared a projection of 2012 resource needs, which includes proposed personnel additions, as well as additional consultant and contract needs to support key initiatives. These projections are summarized in the table below, followed by a discussion of resource needs by program area. The cumulative effect of the increase in the cost of current operations, together with proposed incremental 2012 resource additions, is presented in a table following the discussion of the proposed 2012 resource additions and budget impacts.

<table>
<thead>
<tr>
<th>Projected 2012 Base Operating Budget</th>
<th>Projected increase in staffing and programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Personnel Expense $ 22,531,471</td>
<td>Salaries $ 3,500,675</td>
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<tr>
<td></td>
<td>Payroll Taxes $ 2,137,700</td>
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<tr>
<td></td>
<td>Benefits $ 2,924,051</td>
</tr>
<tr>
<td></td>
<td>Retirement $ 3,157,157</td>
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<tr>
<td><strong>Total</strong> $ 29,986,379</td>
<td><strong>Total Personnel Expense</strong> $ 4,606,040</td>
</tr>
<tr>
<td></td>
<td>Total Meeting Expense $ 791,000</td>
</tr>
<tr>
<td></td>
<td>Meetings $ 1,373,700</td>
</tr>
<tr>
<td></td>
<td>Travel $ 2,635,536</td>
</tr>
<tr>
<td></td>
<td>Conference Calls $ 377,910</td>
</tr>
<tr>
<td><strong>Total</strong> $ 3,804,446</td>
<td><strong>Total Meeting Expense</strong> $ 250,000</td>
</tr>
<tr>
<td></td>
<td>Consultants and Contracts $ 5,993,000</td>
</tr>
<tr>
<td></td>
<td>NERCnet Contract $ 300,094</td>
</tr>
<tr>
<td></td>
<td>IDC Contract $ 1,895,711</td>
</tr>
<tr>
<td><strong>Total</strong> $ 8,188,805</td>
<td><strong>Contracts and Consultants</strong> $ 1,845,000</td>
</tr>
<tr>
<td></td>
<td>Office Rent $ 2,304,257</td>
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<tr>
<td></td>
<td>Office Costs $ 2,802,594</td>
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<td></td>
<td>Professional Services $ 2,005,000</td>
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<tr>
<td></td>
<td>Miscellaneous $ 26,200</td>
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<tr>
<td><strong>Total</strong> $ 7,138,052</td>
<td><strong>Operating Expenses</strong> $ 36,225</td>
</tr>
<tr>
<td></td>
<td>Non-Operating Expenses $ 664,090</td>
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<td></td>
<td>Computer &amp; Software CapEx $ 664,090</td>
</tr>
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<td></td>
<td>Network Equipment $ 664,090</td>
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<td>Furniture &amp; Fixtures $ 664,090</td>
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<tr>
<td><strong>Total</strong> $ 49,781,772</td>
<td><strong>Capital Expenditures</strong> $ 108,000</td>
</tr>
<tr>
<td></td>
<td>Total Base Operating Budget $ 6,845,265</td>
</tr>
</tbody>
</table>
The following is a summary of additional resource needs and incremental 2012 funding requirements by Program area:

- **Standards** — The 4.17 FTE increase for this program area takes into account the addition of staff in 2011 and phasing in of new personnel. These personnel are necessary to support the standards development process, including timely production of high quality results-based standards addressing high priority issues. Existing resources are insufficient to support forecasted workload needs. The need to implement improvements in and provide additional resource support to the standards development process has been consistently recognized in numerous industry, committee, stakeholder and governmental forums, including the Three-Year ERO Performance Assessment. These additional resources will support the training and technical writing capabilities of drafting teams, as well as greater stakeholder and regulatory outreach and coordination. The increase in personnel costs in the Standards Program Area will be partially offset by a reduction of over $300k in consulting costs compared to the 2011 budget. The total increase in funding requirements to support the Standards Program area is approximately $1.6M or approximately 21 percent over the 2011 program area budget.

- **Compliance Operations, Events Analysis, and Enforcement** — The 10.4 FTE increase for these departments in 2012 compared to 2011 reflects personnel additions in 2011, as well as proposed personnel additions in 2012. Two FTEs were added to the Compliance Operations department in 2011 (one transfer and one new hire) and two FTEs (one transfer and one new hire) will be added in 2012. Two new personnel will also be added in 2012 to support Events Analysis and Investigations and four new personnel will be added to the Enforcement area in 2012. Additional Compliance Operations resources are required to support audit oversight and organization registration activities. The personnel additions to the Events Analysis and Investigations Group are required to support events analysis and increased dissemination of information to further assist industry in implementing reliability improvements and mitigating compliance violation risks. Projected enforcement staffing needs are based on a detailed analysis of violations processing time taking into account historic data and assumed increased efficiency. Consulting and Contractor costs are projected to decrease by $315k compared to the 2011 budget due to the elimination of projected nuclear CIP audit workload as a result of the NRC’s assumption of responsibility for these audits and the elimination of funding for the development of an events analysis tool. Ongoing development costs for the Compliance Reporting Analysis and Tracking System (“CRATS”) to support compliance efforts, as well as the Compliance Information Tracking System (“CITS”) and portal applications were reallocated to the IT department and are discussed under IT. The total increased funding requirements to support the Compliance Monitoring and Enforcement and Organization Registration and Certification Program Area is approximately $3.8M or 21.7 percent increase over the 2011 program area budget.

- **Reliability Assessment and Performance Analysis (RAPA)** — The projected 2.75 FTE increase reflects the addition of personnel to this program area in 2011, as well as the phasing in of new hires in 2012. The increase of approximately $193k (16.6 percent)
increase in spending on contractors and consultants reflects additional program area workload driven primarily by NERC standing committee initiatives and responses to the Three-year Assessment, including assessments of the reliability effects of EMP and GMD, gas/electricity interdependencies, and improved data base development and modeling capabilities. In addition, one of the personnel additions represents the transfer of an FTE who supports the NERC Planning Committee from the Situation Awareness and Infrastructure Security Program area given the close alignment between many RAPA and Planning Committee activities. The total increased funding requirement to support the RAPA Program area is approximately $1.1M or 18 percent over the 2011 program area budget.

- **Training, Education and Operator Certification Program** — The addition of one (1) FTE is to support ongoing training programs. The proposed enhancement of a number of training programs and initiatives will also result in an increased funding requirement of approximately $500k or an increase of approximately 17 percent over the 2011 program area budget. This program is primarily funded through user and program fees, although the incremental funding proposed for 2012 is primarily for outside assistance to expedite the development of training modules in an effort to be responsive to needs identified in the Three-year Assessment and by stakeholders, as well as management’s own view of the need to expedite the development of training modules for use by ERO staff and industry.

- **Situation Awareness and Infrastructure Security (SAIS)** — The SAIS program area includes both Situation Awareness and CIP resources. Proposed 2012 personnel additions in the CIP area are offset by other SAIS personnel reductions and transfers. The increase in funding associated with this program area is significantly less than the increase in 2011 funding requirements over 2010 and is driven primarily by funding associated with expanded ES-ISAC capabilities, including the ability to securely communicate and exchange data with governmental authorities and stakeholders. Two additional personnel are proposed to be added to the CIP area to support increases in CIP standard, incident analysis and reporting requirements, among other department workload. These two personnel additions are offset by reductions and transfers of other personnel during 2011, resulting in a net reduction of .33 FTEs for this program area in 2012. Situation Awareness department funding is projected to decrease by approximately $1.1M, down 13.7 percent from 2011 funding requirements, while CIP department funding is projected to increase by approximately $2.0M, up 31.5 percent from 2011 funding, primarily driven by investments in ES-ISAC capabilities. The total SAIS funding increase of approximately $858k represents a six percent increase over 2011 funding requirements for this program area.

- **Administrative Services** — The increase in 2012 projected Administrative resource needs and associated funding requirements is primarily driven by the addition of attorneys to support the standards development and compliance workload, additional personnel, software and systems to support IT initiatives and the transfer of funding for regional audits and the addition of personnel to establish an ERO enterprise risk management function. Two attorneys were added in 2011 and two additional attorneys
and an administrative assistant are included in the 2012 budget to address increased standards and compliance workload. The addition of two personnel to NERC’s IT group in 2012 is primarily related to required infrastructure and personnel support driven by personnel levels and information processing needs, as well as project management to support various program areas’ initiatives, such as SAFNR and compliance information systems, among others. To minimize the risk of potential downtime due to the loss of power or telecommunications connectivity, NERC previously decided to relocate its servers and switch equipment to a third-party data center equipped with backup power supply and appropriately scaled fire prevention systems. This relocation was accelerated to 2011 as part of NERC’s office relocation strategy. The investment made in 2011 is expected to significantly improve the security of NERC’s IT infrastructure, as well as lower ongoing communications costs. The total increase in 2012 funding for the General and Administrative Program area of $7.5M reflects transfers of funding from other departments of approximately $842.0k, including transfers of funding for of approximately $517.0k for IT projects to the IT department to facilitate improved management, integration and deployment of IT resources.

- **Working Capital Reserves** — In its 2010 budget, NERC eliminated funding for a cash working capital reserve in order to mitigate the overall funding increase over 2009. In 2011, NERC believed it was prudent to reestablish this reserve in light of the growth in the size of the organization, its cash flow requirements and the potential for unanticipated short-term resource needs driven by potential governmental directives, industry needs or litigation that could potentially arise in connection with enforcement actions. NERC’s 2011 budget included $5M in working capital reserve funding, a significant portion of which was required to strengthen NERC’s balance sheet due to the impact of accrual accounting adjustments on the company’s 2009 year-end working capital balance. NERC is currently projecting it will have a 2011 year-end working capital balance of approximately $1.4M. In addition, while under generally accepted accounting principles NERC is required to reflect the amortization of the leasehold for Atlanta; actual rent expense is abated for a significant portion of 2012 thereby enhancing NERC’s free cash flow. In addition, NERC still has in place a $4M line of credit. Based on these three factors, NERC is not at this time expecting to request additional funding in 2012 to restore or further increase working capital. Management will continue to evaluate working capital needs throughout the business plan and budget review process based on updated year end working capital projections.

The following charts and tables summarize the projected increase in 2012 funding requirements. The first chart breaks down the increase by major statement of activity category (Personnel Costs, Meetings, Travel and Conference Calls, Consultants and Contracts, etc.) These charts and tables are followed by a table showing the breakdown of funding requirements by Program Area and a bar chart showing the relative increases by Program Area, a chart showing 2011 and 2012 FTEs by Program area and a comparative Statement of Activities. The charts are followed by more detailed discussions of each Program Area, including its scope and functional description, key assumptions affecting 2012, 2012 goals and deliverables and a detailed discussion of projected 2012 resource requirements.
## 2012 Business Plan and Budget

Approved by Board of Trustees on [August 5], 2011

### 2011 Base Operating Budget

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Salaries</td>
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<td>Total Personnel Expense</td>
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<table>
<thead>
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<th>Category</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Meetings</td>
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<td>Travel</td>
<td>$250,000</td>
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<td>Conference Calls</td>
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<td>Total Meeting Expense</td>
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<tbody>
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<td>NERCnet Contract</td>
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<tr>
<td>IDC Contract</td>
<td>$5,869</td>
</tr>
<tr>
<td>Contracts and Consultants</td>
<td>$695,089</td>
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<table>
<thead>
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<th>Category</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Office Rent</td>
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<td>Office Costs</td>
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<td>Professional Services</td>
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<td>Operating Expenses</td>
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<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer &amp; Software CapEx</td>
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<td>Network Equipment</td>
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<td>Furniture &amp; Fixtures</td>
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<tr>
<td>Capital Expenditures</td>
<td>$113,910</td>
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<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Total Base Operating Budget</td>
<td>$7,900,571</td>
</tr>
</tbody>
</table>

### Reductions in Other Sources of Funding

- Working Capital Reserve Funding: $(5,000,000)
- Penalty Sanctions: $(5,000,000)

**TOTAL FUNDING REQUIREMENT**

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Capital Reserve Funding</td>
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<tr>
<td>Penalty Sanctions</td>
<td>$(5,000,000)</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$2,900,571</strong></td>
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## Introduction and Executive Summary

2012 Business Plan and Budget

Approved by Board of Trustees on [August 5], 2011

<table>
<thead>
<tr>
<th>Base Operating Budget</th>
<th>Budget 2011</th>
<th>Projection 2011</th>
<th>Budget 2012</th>
<th>Variance 2012 Budget v 2011 Budget</th>
<th>Variance %</th>
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</thead>
<tbody>
<tr>
<td>Reliability Standards</td>
<td>7,682,752</td>
<td>8,192,278</td>
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<td>1,621,400</td>
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<td>Compliance Enforcement and Organization Registration</td>
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<td>19,588,072</td>
<td>21,243,643</td>
<td>3,785,742</td>
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<td>Reliability Assessments and Performance Analysis</td>
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<td>7,458,554</td>
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<td>Training, Education and Operator Certification</td>
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<td>Situation Awareness (SA)</td>
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<td>8,174,106</td>
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<td>Critical Infrastructure Protection (CIP)</td>
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<td>Total Situation Awareness and Infrastructure Security</td>
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<td>Working Capital Reserve</td>
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<td>Total Funding</td>
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<td>2,900,571</td>
<td>5.4%</td>
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### Comparison of 2012 to 2011 Base Operating Budget

![Comparison of 2012 to 2011 Base Operating Budget](image-url)
Section A — 2011 Business Plan

Reliability Standards

<table>
<thead>
<tr>
<th>Reliability Standards Program (in whole dollars)</th>
<th>2011 Budget</th>
<th>2012 Budget</th>
<th>Increase (Decrease)</th>
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<td>Total Funding Requirement</td>
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<td>$9,304,151</td>
<td>$1,621,400</td>
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Program Scope and Functional Description
NERC’s Reliability Standards Program develops and maintains standards designed to ensure the reliability of the bulk power system in North America. NERC’s ANSI-accredited standards development process is open, balanced, and transparent, relying on industry subject matter experts to scope, draft, and ultimately approve the standards for adoption by NERC’s Board of Trustees and filing with regulatory authorities in the United States and Canada.

NERC standard development advisors and other standards staff facilitate standards drafting team activities, assist the drafting teams in adherence to the development process, and ensure that the quality of documents produced are appropriate for approval. Each standard must be technically excellent, just, reasonable, not unduly discriminatory or preferential, in the public interest, and developed in adherence with the approved process in order to be adopted by the U.S. and Canadian regulatory authorities.

For North American standards, the Standards Committee (one of NERC’s standing committees) provides process oversight, verifying that the standards development has been faithfully executed and now ensuring the quality of the work product. The Standards Committee is also responsible for the development and implementation of the three-year Reliability Standards Development Plan used to establish priorities for standards development, respond to regulatory directives, and guide standard development activities.

The standards program also provides for eight NERC Regions to develop Regional Standards when reliability gaps on a regional basis are detected. The NERC standards staff similarly provides support for each of the Regional Standards development processes where their standards development product employs portions of the process for final quality review,
presentation to the NERC Board of Trustees and submission to the applicable regulatory authorities for adoption.

NERC standards and other NERC technical staff actively monitor both the regional and North America-wide standards development activities and provide technical and development process comments to the standards development process in order to leverage the experience of the Standards Staff and aid the development and regulatory approval process.

**2012 Goals and Key Deliverables**

In 2012, NERC will focus standards development in two areas: meeting regulatory obligations for standards development and revisions, as specified in regulatory directives, and continuing to develop risk-based standards focused on key reliability outcomes under the new prioritization process first adopted in 2011. In 2012, NERC will continue to focus on increasing the productivity and results from standards development efforts, including:

- Supporting the three-year Standards Development Plan, including development of prioritized standards and the long-term transition to results-based standards
- Addressing Three-Year ERO Performance Assessment directives and specific NERC actions related to standards, especially quality and timeliness
- Responding to and reducing the backlog of FERC standards directives
- Maintaining ANSI accreditation for the standards development process
- Supporting the development of new CIP and system protection and control standards
- Improving the quality of standards drafting, training, and communications
- Removing administrative requirements from existing standards where feasible
- More frequent interactions and coordination with FERC staff
- Increasing coordination with compliance and enforcement

**Resource Requirements**

**Personnel**

In 2010, the NERC standards program area began to re-align its organization based on key drivers for success (improved quality and timeliness in standard development, improved accuracy and quality of web-based information, and improved stakeholder outreach); to create clear accountability for accomplishing the program mission at the strategic and tactical level; to enhance organizational efficiency in decision-making and execution; and to create a sustainable level of program activities and output. In 2011, the additional staff was added to further support the goals and key deliverables set forth above. In 2012, management proposes adding five (5) additional personnel (4.17 FTEs based on projected timing of hiring) to the Standards Program area, the cost of which are partially offset by almost the complete elimination of the use of outside contractors and consultants. In order to provide the resources necessary to fully

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3 Results-based Standards (RBS) comprise: Performance-based, Risk-based, and Competency-based standards.
support standards project management, one project manager position will be added. This position will provide overall department wide support to standards project management activity, including standards development, process and legal and regulatory interface. This added position will help ensure a controlled end to end approach to standards development.

A regulatory coordination position will be added to more effectively support regulatory communications and standards processing in both the U.S. and Canada. As standards have evolved from the initial version 0 in 2007, NERC’s standards Program Area interactions and communications with governmental and regulatory authorities, including responding to directives, have become much more demanding, requiring additional resource support. One additional administrative position will be added to support drafting team meeting activity, which is extensive and unable to be supported using existing administrative support.

One position will also be added to support standards information related content on the NERC web site required by the enabling regulations. NERC is charged with the responsibility to keep the industry and regulators informed of the status of each of its standards relative to effective date in the U.S. and Canadian Provincial jurisdictions.

Two standards specialists with technical writing skills will also be added to aid drafting teams in the drafting of standards and associated documents developed during the standard development process. This will improve the quality of the standards and reduce the need for inefficiency resulting from subsequent revisions during later stages in standards processing. The standards specialists will help drafting teams document the technical justification for proposed requirements, will help drafting teams develop effective webinar presentations, and will also provide assistance in verifying the accuracy of drafting team documents posted for public review.

**Contractor Expenses**

After taking into account the completion of certain work in progress and the elimination of the need to use outside contractors as a result of proposed personnel additions, management is proposing a contractor and consulting budget for the Reliability Standards Program area of just $15,000 for ongoing training of standards staff, representing a reduction of approximately $476k from 2011 budgeted levels inclusive of the transfer of $92k in funding for IT-related projects discussed in the next paragraph.

Funding associated with IT infrastructure to support standards development and processing activities, including web site applications, has been transferred to the IT department under the Administrative Program area in order to provide for better integration and more efficient support of NERC’s technology infrastructure. This is further discussed under the Administrative Services, Information Technology section of the 2012 Business Plan and Budget.
### Statement of Activities and Capital Expenditures

#### 2011 Budget & Projection, and 2012 Budget

<table>
<thead>
<tr>
<th>Reliability Standards</th>
<th>Variance 2011 Projection v 2011 Budget</th>
<th>Variance 2012 Budget v 2011 Budget</th>
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<tr>
<td><strong>Funding</strong></td>
<td>2011 Budget</td>
<td>2011 Projection</td>
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<td>ERO Funding</td>
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<tr>
<td>Testing Fees</td>
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<td>-</td>
</tr>
<tr>
<td>Services &amp; Software</td>
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<td>Workshops</td>
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<td>-</td>
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<tr>
<td>Interest</td>
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<td><strong>Expenses</strong></td>
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<td><strong>Personnel Expenses</strong></td>
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<td>Furniture &amp; Fixtures CapEx</td>
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<td>Equipment CapEx</td>
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<td><strong>Change in Fixed Assets</strong></td>
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<td><strong>TOTAL CHANGE IN NET ASSETS</strong></td>
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<td>(511,659)</td>
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</table>
Consistent with its 2011 Business Plan and Budget presentation, this Program Area is comprised of NERC’s Compliance Operations, Enforcement, and Events Analysis and Investigations departments. While these departments operate independently, they have been consolidated to facilitate year over year budget comparisons. The 10.4 FTEs combined total increase for these departments in 2012 compared to 2011 reflects personnel additions in 2011, as well as the proposed personnel additions in 2012. Two FTEs were added to the Compliance Operations department in 2011 (one transfer and one new hire) and two FTEs will be added in 2012 (one transfer and one new hire). Two new personnel will be added in 2012 to support Events Analysis and Investigations and four new personnel will be added to the Enforcement area in 2012. Additional Compliance Operations resources are required to support audit oversight and organization registration activities. The personnel additions to the Events Analysis and Investigations group are required to support events analysis and increased dissemination of information to further assist industry in implementing reliability improvements and mitigating compliance violation risks. Projected enforcement staffing needs are based on a detailed analysis of violations processing time taking into account historic data and assumed increased efficiency. Consulting and Contractor expense for this program area is inclusive of reductions resulting from transfers of funding for the development of compliance-related software and external audit resources to the IT budget under the Administrative Program area. The following paragraphs provide additional detail regarding the key goals, deliverables, and incremental resource requirements for each of the three departments in this program area.

### Compliance Monitoring and Enforcement and Organization Registration and Certification Program

<table>
<thead>
<tr>
<th>Compliance Monitoring and Enforcement and Organization Registration and Certification Program</th>
<th>2011 Budget</th>
<th>2012 Budget</th>
<th>Increase (Decrease)</th>
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Compliance Operations

**Program Scope and Functional Description**

The Compliance Operations department is responsible for Regional Entity compliance operations coordination and collaboration, audit training and oversight, development and oversight of the annual Compliance Monitoring and Enforcement Program (CMEP) implementation plan and annual report, maintenance of the Reliability Standards Audit
Worksheets (RSAWs), the registration and certification functions, interface and outreach to the industry, and staff support to the stakeholder Compliance and Certification Committee.

This department will continue to focus its efforts on increasing consistency in CMEP execution by providing more assistance to the Regional Entities, development of programs to identify Regional Entity inconsistency in compliance applications with follow up guidance to improve consistency, and providing increased training for auditors. NERC auditors will continue to participate in Regional Entity audits, providing assistance to foster consistency and improve Regional Entity auditor understanding of standards and consistency throughout the industry in a proactive manner.

**2012 Goals and Key Deliverables**

- Continue the Regional Entity audit observation, key reliability standard spot check and consistency programs with an emphasis on identifying and promoting best practices and sharing lessons learned to support both Regional and registered entity compliance improvement.

- Provide timely information to the Regional Entities and industry through various outreach programs and public bulletins to promote transparency and consistency of compliance activities.

- Work with NERC’s ERO IT personnel to develop an enhanced CMEP audit and annual actively monitored list modules for the NERC and ERO software systems/platform to facilitate development of the annual implementation plan and development of RSAWs.

- Provide ongoing feedback to the Standards Program area to help maintain a focus on reliability-based priorities and ensure sharing of lessons learned. Establish a field trial for mock compliance audits of standards during the implementation window to provide guidance to industry to facilitate compliance by the effective date of new or revised standards.

- Continue to develop, implement, and institutionalize training strategies in collaboration with the Regional Entities and NERC’s Director of Training to enhance auditor proficiency and consistency.

**Resource Requirements**

Compliance Operations resources were augmented during 2011, through the transfer of two FTEs into the department, and will require further strengthening in 2012, through the addition of two FTES, to adequately perform audit oversight and assurance functions and related initiatives. The proposed resource additions will also support the department’s issuance of compliance application notices and bulletins to better inform the Regional Entities and industry on compliance best practices and lessons learned, and to clarify compliance applications and practices. The following paragraphs further describe theses additional resource requirements.
**Organization Registration and Certification**

NERC recognizes that a strong registration and certification process is the essential starting point of the compliance process for Registered Entities. As the industry continues to refine delineation of shared responsibilities for Reliability Standards NERC will provide information and assistance in the establishment of Joint Registration Organizations (JRO) and Coordinated Functional Registration (CFR). NERC will provide more guidance on better aligning entities with functions and the appropriate standards and requirements. Due to dynamics in the industry, registration changes are being realized where a number of entities require organizational certification in accordance with the NERC Rules of Procedure Section 500. In 2011, one FTE was added to support these activities over and above what was included in the 2011 Business Plan and Budget. This FTE is reflected as an additional FTE for purpose of the 2012 Business Plan and Budget.

**Audit Assurance and Oversight**

Several critical new risk-based compliance initiatives are in the planning and development stage that are directed at enhancing Regional Entity consistency in CMEP implementation through audit validation, high impact reliability standards spot checks, and spot checks of Regional Entity audits of critical registered functions. Ongoing programs to support consistency and transparency objectives include: Regional Entity audit observations and audits, Reliability Standard Audit Worksheet maintenance and development, and improvements in auditor training. NERC audit staff will also work closely with NERC’s Standards department to provide compliance information and guidance during standards drafting, including guidance in the standards implementation plan. A related initiative will include mock audits of critical reliability standards during the implementation phase of new and revised standards to provide information and guidance to both ERO auditors and industry to facilitate industry compliance prior to the effective date of the new or revised standard.

NERC is also moving forward on a comprehensive risk-based reliability compliance monitoring program to provide in-depth information and guidance to the industry on improving compliance programs and to refine the annual CMEP Implementation Plan and Actively Monitored List. This initiative will help NERC and the Regions develop more efficient and effective audit programs. Appropriately scoping audits and allowing Regional Entities flexibility to react to trends and significant events or activities is essential to provide a reliability focused compliance program. Development of the annual plan and AML will include greater analysis of the statistics available and improved criteria to determine a core set of standards for auditing based on the registered function and top reliability risks.

The department’s auditors will also work closely with and support NERC’s ERO risk management framework, which will be launched in 2012 and is discussed further under the Finance Department section within the Administrative Program Area.
One FTE was transferred to the Compliance Operations department in 2011 and two additional FTEs are proposed to be added in 2012 to support the foregoing initiatives.

Compliance Enforcement

Program Scope and Functional Description
NERC’s Compliance Enforcement department conducts all of NERC’s enforcement activities, including:

- Docketing of all possible violations coming into the NERC enforcement program
- Prosecution of compliance violation matters arising out of NERC-led investigations and audits
- Review of all mitigation plans and dismissals approved by Regional Entities
- Processing of all compliance violations prosecuted by Regional Entities
- Analysis of compliance statistics

2012 Goals and Deliverables
A priority for this department is to achieve greater efficiencies in enforcement processing by focusing both NERC and Regional Entity compliance enforcement resources on the cases that have the most significant impact on the reliability of the bulk power system. This should reduce the overall ERO compliance caseload by ensuring that the number of cases processed through filing of a notice of penalty exceeds the number of cases coming into the ERO docket and should allow NERC to close out cases expeditiously to provide timely lessons learned to the industry. NERC’s Compliance Enforcement staff has realized significant efficiencies and expects to gain efficiencies through better utilization of existing resources in the future.4

Despite efforts to attain greater efficiencies, a significant gap is anticipated in the number of cases coming into the Enforcement process and the number of cases the Enforcement team can close out on a monthly basis. In the past year, as reflected in Figure 1, the ERO’s caseload of active violations expanded from 2006 in January 2010 to 3193 in January 2011. The rate of new violations coming into the caseload has increased dramatically from an average of 140

4 There is substantial evidence of this increased efficiency. In 2010, Compliance Enforcement rolled out new risk-based processes in early 2010. These processes, including the introduction of the Disposition Document, Abbreviated Notice of Penalties, and other process improvements, have helped streamline compliance enforcement. Over the course of the year, Compliance Enforcement has also increased collaboration with Regional Entities and increased the number and expertise of Enforcement Staff. As a consequence, Compliance Enforcement has increased by 3.5 times the number of violations processed each month in 2010 compared to the number of violations processed each month in 2009 (70/month vs. 20/month).

An administrative citation process was initiated in January 2011 that will enable NERC and the Regional Entities to address new violations by submitting a single streamlined NOP covering numerous lower risk violations. In its March 3, 2011 Order accepting the first administrative citation filing, the Federal Energy Regulatory Commission encouraged the use of this new process. See North American Electric Reliability Corporation, 134 FERC ¶ 61,157 (2011) (“March 3, 2011 Order”). As ERO compliance staffs and the industry gain familiarity with the process, NERC will strive to submit an average of about 100 violations each month through the administrative citation process, which would represent an increase in the rate of processing notices of violations by the NERC Board of Trustees Compliance Committee of 100 to 150 percent.
violations/month in early 2010 to an average of 203 violations/month at the start of 2011. The increase in caseload is primarily attributable to the large number of violations of CIP Standards have been and will be entering the system. As reflected in Figure 2, the number of incoming violations each month from non-CIP reliability standards has been relatively stable since June 2008, but with the staged implementation of the CIP reliability standards, the number of incoming violations each month from CIP reliability standards continues to rise.

The influx of new violations is expected to outstrip the number of violations NERC can process each month. Compliance Enforcement processed to BOTCC approval an average of 70 violations per month in 2010. With the implementation of streamlined procedures and the advent of the administrative citation process, the team has processed an average of 130 violations per month for the first three months of 2011.

Beyond management of the caseload, another significant area of focus for the next year will be to improve the submittal and completion of mitigation plans. As reflected in Figure 1 below, the increase in active violations in 2010 brought with it an increase in the number of unmitigated violations and a decline in the overall percentage of active violations subject to a mitigation plan. Currently, less than half of the active violations in the caseload have been mitigated, and a number of violations dating back to 2007 are not yet covered by mitigation plans. To help manage risk to the bulk power system, Compliance Enforcement will focus on understanding and improving upon the mitigation process.

**Figure 1: Compliance Processing Statistics for Calendar Year 2010**
Figure 2: Violations Submitted per Month (CIP vs. Non-CIP)

Resource Requirements

**Personnel**

As a result of the resource demands described above, NERC is budgeting four additional FTEs in 2012 to meet its enforcement processing goals. In assessing the number of employees required to process the anticipated number of violations, NERC staff conducted an analysis of the hours historically required to process a violation using the most recent hours per violation processing rate. Based on the current rates of processing and anticipated efficiency gains, a full complement of budgeted analysts and regulatory assistants (eight FTEs) should be able to achieve an average of 175 violations per month. To keep ahead of the current average rate of new violations and work down the active caseload, Compliance Enforcement should be resourced to process 225 to 250 new violations per month. Accordingly, for 2012, an increase of three FTEs will be required by Compliance Enforcement to meet the currently expected inflow of violations.

In addition, the department is creating a new technical advisor position, which will be filled by the current Manager of Compliance Reporting, Tracking and Analysis. This new technical advisor function will focus on reviewing mitigation plans and assessing mitigation activities, which, as noted above, is an area of focus for Compliance Enforcement. The technical advisor also will provide overall technical support for Compliance Enforcement in the processing of

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5 It should be noted that in the 2010 Business Plan and Budget, Compliance Enforcement projected that the eight FTEs could process 150 violations per month, after factoring in a 20 percent efficiency gain.
notices of penalties, in reviewing dismissals, and in other areas where technical support is needed. As a result, Compliance Enforcement will need to recruit a new Manager of Compliance Reporting, Tracking and Analysis.

**Contractor Expenses**

No contractor or consulting resources are proposed within the group for 2012.

**Event Analysis and Investigations**

**Program Scope and Functional Description**

This department is critical to supporting the ERO’s reliability goals through its work to evaluate bulk power system events, undertaking appropriate levels of analysis to determine the causes of the events, promptly assuring tracking of corrective actions to prevent recurrence, and providing lessons learned to the industry. The primary responsibilities of this department include: directing all NERC activities with respect to event analysis, formal complaints and non-public compliance investigations, assuring consistent, timely, and coordinated results, as well as interfacing with regulatory authorities, Regional Entities, industry and stakeholder committees, registered entities, and other focus groups regarding events analysis and compliance investigations.

**Developing a Culture of Reliability Excellence**

Through the Event Analysis Program, the ERO strives to develop a culture of reliability excellence that promotes and rewards aggressive self-critical review and analysis of operations, planning, and critical infrastructure protection processes. This self-critical focus must be ongoing, and the industry must recognize that registered entities are linked together by their individual and collective performances. This focus is the root of understanding the underlying cause of events and avoiding similar or repeated events through the timely identification and correction of event causes and through the sharing of lessons learned. The event analysis process also provides valuable input for training and education, reliability trend analysis efforts, and reliability standards development, all of which support continued reliability improvement.

**Collaboration**

Successful event analysis depends on a collaborative approach in which registered entities, Regional Entities, and NERC work together to achieve a common goal. The process requires clarity, certainty and consistent adherence to reliability principles by bulk power system owners, operators, and users that perform a wide array of reliability functions.

**Being a Learning Organization**

As a learning organization, Event Analysis serves an integral function of providing insight and guidance by identifying and disseminating valuable information to owners, operators, and users of the bulk power system who enable improved and more reliable operation. As such, Event Analysis is one of the pillars of a strong ERO.
2012 Goals and Key Deliverables

- Complete development and implementation of a comprehensive Event Analysis Program that engages bulk power system owners, operators, and users in determining root causes and lessons learned from events.
- Understand the cause of events and categorize by Risk Priority
  - Individual events
  - Periodic review of events in aggregate to detect emerging trends and signs of decline in reliability performance
- Further develop a systematic program that identifies and publishes improvement opportunities, including, as appropriate, lessons learned, corrective actions, and an evaluation of recommendations.
- Managing the desired shift in industry paradigm to a more reliability excellence based culture.
- Develop the capability to integrate risk analysis into the event analysis process; this includes a coordinated effort with the RAPA program area to identify adverse trends to reliability and the development of severity risk indexes.
- Share key results to facilitate enhancements in and support of NERC programs and initiatives (e.g., performance metrics, standards, compliance monitoring and enforcement, training and education, etc.)
- Be recognized as independent and objective, striving at all times for what is best for the reliability of the bulk power system and not unduly influenced by alternative interests of government or industry.
- Enhance the public release of initial findings and lessons learned of NERC, Regional, and Registered Entity event analyses.
- Provide training and educational opportunities regarding lessons learned, analysis and investigative techniques, including root-cause analysis, reporting processes and formats for all registered entities.
- Engage the Operating and Planning Committees, as well as industry trade associations and reliability forums, in the development of best practices and examples of excellence.
- Balancing the discreet roles and activities of event analysis and investigations processes.

Resource Requirements

Personnel
Two additional personnel (1.5 FTEs based on projected timing of hires) are planned for this department in 2012 based on the significant increase in the department responsibilities, existing and projected workload.
The NERC Compliance Violation Investigation Group (CVI) was reorganized and renamed as the Event Analysis and Investigation Group (EA&I) in February of 2010. As part of this reorganization, all event analysis activities were assigned to this group, in addition to compliance investigation and complaint activities. The new ERO Event Analysis Program requires a concentrated effort of the department’s technical staff to perform a quality review of all event analysis reports submitted to NERC, to capture metrics, trends and severity index risk assessments, including the review and analysis of 115 qualified events in the first phase of the event analysis field trial. The analysis effort requires in-depth technical reviews and is also used to develop lessons learned and alerts.

Due to the technical qualifications residing within the department, the department supports many activities outside their core job duties. The department supports:

- The Compliance Operations Group by drafting, reviewing, and commenting on CANs;
- The Standards Group by reviewing Standard Drafting Team documents and providing technical input to issues surrounding the compliance elements;
- The Legal and Enforcement Groups by developing notifications of findings, reviewing Violation Dismissals, NOPs, and providing technical input to issues surrounding compliance elements; and
- The Training Group by developing comprehensive Investigation and root cause analysis training courses. These courses will include facilitating two individual 8-hour classes quarterly.

Resources must also be devoted to training and mentoring staff to both build and leverage the knowledge necessary to perform departmental responsibilities. The development of detailed databases and spreadsheets measuring the ongoing reliability performance of events and occurrences on the bulk power system also requires considerable resources.

**Contractor Expenses**

Consulting and contractor expenses for this department are primarily related to the retention of subject matter experts to assist in the new event analysis program as well as ongoing investigations. As a result of proposed increases in staff, funding for contractors and consultants is projected to be $85K less in 2012 compared to 2011.
## Compliance Monitoring and Enforcement and Organization Registration and Certification

### 2011 Business Plan Compliance Monitoring and Enforcement and Organization Registration and Certification

2012 Business Plan and Budget
Approved by Board of Trustees on [August 5], 2011

### Statement of Activities and Capital Expenditures

#### 2011 Budget & Projection, and 2012 Budget

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<tr>
<th>Funding</th>
<th>Variance</th>
<th>2011 Budget</th>
<th>2011 Projection</th>
<th>2012 Budget</th>
<th>Variance</th>
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<td>Services &amp; Software</td>
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<td>Workshops</td>
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<td>(26,494)</td>
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<td>Leasehold Improvements</td>
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Reliability Assessment and Performance Analysis

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<tr>
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<th>2011 Budget</th>
<th>2012 Budget</th>
<th>Increase (Decrease)</th>
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<tr>
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<td>16.50</td>
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<td>-</td>
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<td>Inc(Dec) in Fixed Assets</td>
<td>$73,251</td>
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<td>$24,368</td>
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<td>Total Funding Requirement</td>
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Program Scope and Functional Description

NERC’s Reliability Assessment and Performance Analysis (RAPA) program conducts annual seasonal and long-term reliability assessments, designed to assess existing and planned short and long-term resource adequacy and operating reliability. Further, the program identifies as well as assesses risk and severity in reliability performance, measures progress in improving current reliability, tracks leading indicators of future reliability and provides risk-informed input into NERC’s standards and compliance processes. To support these functions, RAPA maintains detailed databases measuring the ongoing reliability performance of generation, transmission and demand response resources. RAPA also identifies and analyzes key issues that may affect reliability, such as market practices, legislation, regulation, technology developments, high-impact low frequency (“HILF”) events, industry trends, and proposed public policy measures, and documents these special assessments.

RAPA’s resource needs are both driven and supported by the Board of Trustees, along with the Member Representatives, Planning, Operating, Critical Infrastructure Protection, Standards, and Compliance Committees strategic work plans, along with numerous subcommittees, working groups, and task forces.

2012 Goals and Key Deliverables

- Revised definition of adequate level of reliability of the bulk electric system, through collaboration with industry stakeholders and standing committees
- Issue reliability assessment reports, guidelines, recommendations and Alerts as needed:
  - One 10-year Long-Term Reliability Assessment
  - Two pre-seasonal assessments: Summer and Winter
  - Two post-seasonal operational assessments: Winter and Summer
- One annual risk/severity and reliability metrics report, including overall system risk and violation risk analysis
- Two equipment reliability reports: Transmission (TADS) and Generating (GADS)
- Geomagnetic Disturbance (GMD) effects on reliability of the bulk power system
- Up to two additional special assessments addressing key reliability issues
- Additional reports addressing industry reliability concepts and emerging issues

- Oversight of GADS, TADS, and DADS
- Strengthen data collection and validation processes by designing, creating, testing, and implementing data checking systems for reliability and risk assessments
- Build and sustain an enterprise reliability assessment and performance analysis team
- Develop Standard Authorization Requests to address deficiencies or needs revealed by reliability assessments and performance analysis
- Lead the study of current and future frequency response performance in the Eastern Interconnection and determine corrective actions as necessary
- Continued assessment and improvement of system protection and control schemes
- Sponsor system model improvements for each of the interconnections
- Develop and sustain power flow and dynamics cases for forensics and model validation
- Provide support and leadership to the Planning Committee, and standing committee subcommittees, working groups, and task forces serving the Standing Committees

Resource Requirements
RAPA activities have expanded significantly over the past two years. This activity level is expected to continue in 2012. RAPA added one FTE during 2011 to support department workload in the modeling area and is proposing to add two personnel in 2012 (one transfer from SAIS and one new hire), resulting in 2.75 FTEs after taking into account the projected timing of hires). Contractor and consulting costs are projected to increase by approximately $193k over 2011.

Personnel
The continued expansion and acceleration of activities will require one additional employee in 2012 to support interconnection power flow and dynamic modeling and validation efforts. In addition, one FTE represents the transition of contractor costs to a full-time equivalent, and has a neutral impact on the overall RAPA budget.
Contractor Expenses
Consultant and contracts resource needs are projected to increase approximately $193k over 2011. This increase is primarily driven by additional resources needed to:

1. Evaluate the reliability impacts from GMD and provide oversight of the Spare Equipment Database. These activities are supported by both the NERC Standing Committees and the ESCC.

2. Improve reliability assessment benchmarking databases, the need for which was recognized in the Three-Year Assessment and incorporated in the Reliability Assessment Improvement Plan approved by NERC’s Planning Committee.

3. Prepare a Probabilistic Assessment of Resource Adequacy, which was also recognized as needed in the Three-Year Assessment and by the Planning Committee.

4. GADS and TADS programming and oversight to support performance analysis and risk/Severity assessments, as well as Planning and Operating Committees’ initiatives.

5. Improve static and dynamic modeling efforts needed to support ERO and Regional Entities, as well as address Planning, Operating, and Standards Committee requirements.
## Statement of Activities and Capital Expenditures

### 2011 Budget & Projection, and 2012 Budget

<table>
<thead>
<tr>
<th>Reliability Assessment and Performance Analysis</th>
<th>Variance</th>
<th>Variance</th>
</tr>
</thead>
</table>

### Funding

<table>
<thead>
<tr>
<th>Description</th>
<th>2011 Budget</th>
<th>2011 Projection</th>
<th>2012 Budget</th>
<th>v 2011 Budget Over(Under)</th>
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<td>$4,802,760</td>
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<td>Testing Fees</td>
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<tr>
<td>Services &amp; Software</td>
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### Expenses

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<th>2011 Projection</th>
<th>2012 Budget</th>
<th>v 2011 Budget Over(Under)</th>
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<td>$2,624,106</td>
<td>$144,668</td>
<td>$2,907,133</td>
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<td>Meeting Expenses</td>
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<td>$516,750</td>
<td>$48,000</td>
<td>$417,825</td>
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<td>$68,129</td>
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<td>Computer &amp; Software CapEx</td>
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<td>Furniture &amp; Fixtures CapEx</td>
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<td>Equipment CapEx</td>
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<td>Leasehold Improvements</td>
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<td>(Incr)Dec in Fixed Assets</td>
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Training, Education, and Operator Certification

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<th>Training, Education and Operator Certification (in whole dollars)</th>
<th>2011 Budget</th>
<th>2012 Budget</th>
<th>Increase (Decrease)</th>
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Program Scope and Functional Description

In 2012, NERC will enhance its training programs in response to the industry’s recognition of the need for more and ongoing training opportunities for auditors and investigators to achieve consistent application of the reliability standards, identified in the Three-Year Assessment.

NERC’s Training and Education Program provides oversight and coordination of the delivery of training programs that support NERC’s Standards, Compliance Operations, Events Analysis and Investigations, and Enforcement department training needs.

NERC’s Training and Education Program also supports NERC’s System Operator Certification and Continuing Education programs, which ensure that personnel operating the bulk power system have the skills, training, and qualifications needed to operate the system reliably. NERC maintains the credentials for over 6,000 system operators, effectively licensing them to work in system control centers across North America. NERC’s system operator certification exam is designed to: test specific knowledge of job skills and reliability standards; and prepare operators to ensure standards are met and quickly and confidently react when unexpected situations occur. Once an operator passes the certification exam, he or she is required to maintain certification through completing NERC-approved continuing education activities. The certification exam is created by the Personnel Certification Governance Committee, a group of operational experts, trainers, and supervisors. Exams are updated on an 18-month cycle.

2012 Goals and Deliverables

In response to needs identified in Three-Year Assessment and through stakeholder and Regional Entity feedback, training and education opportunities will be further expanded for NERC and Regional Entity staff, registered entities, and stakeholders. For registered entities, this training and education will focus on objectives related to various standards including how to best comply with standards and improve bulk power system reliability – for both operational and cyber related topics. For NERC and regional staff, the training and education will focus on...
consistent audit and investigation techniques and standards application. Other training will focus on skills development in number key areas, including:

- Critical Infrastructure Protection standards information;
- Teachable lessons-learned from past events;
- Identified themes from trending and common cause analysis;
- Effective compliance cultures with model compliance program and templates;
- Effective root apparent and common cause analysis techniques (as part of a culture of compliance);
- Quality improvement of registered entity self-reporting and self-certification;
- Currently-monitored standards;
- Reliability assessment/system planning fundamentals and requirements;
- Entity registration process, issues, and alternatives;
- Human performance effort reduction techniques;
- Systematic approach to training; and
- Project management.

NERC will provide some of these learning opportunities through compliance workshops hosted by the Regional Entities. NERC will also host workshops, webinars, classroom teaching, as well as use vendors to develop training modules and supplement internal training resources, as NERC designs and implements further NERC-hosted electronic training and educational platforms. NERC’s Training and Education group will also continue to develop and deliver a personnel development program to advance and improve the skills of NERC’s operating staff. NERC’s Human Resources department will continue to budget and manage the delivery of more traditional corporate employee training and continuing education programs.

Resource Requirements

**Personnel**
One new position (.5 FTEs based on timing of hiring) will be added to support ongoing training and educational programs.

**Contractor Expenses**
Contractor expenses are projected to increase by approximately $349k over 2011 levels due primarily to the need for external support to more rapidly develop and deploy training programs while moderating the need for increased staffing.
### Statement of Activities and Capital Expenditures
#### 2011 Budget & Projection, and 2012 Budget

**Training and Education**

<table>
<thead>
<tr>
<th>Variance</th>
<th>Variance</th>
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<tr>
<td>Over(Under)</td>
<td>Over(Under)</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>ERO Funding</strong></td>
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<tr>
<td>NERC Assessments</td>
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<tr>
<td>Penalty Sanctions</td>
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<td><strong>Total NERC Funding</strong></td>
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<tr>
<td>Membership Dues</td>
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<tr>
<td>Testing Fees</td>
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<td>Services &amp; Software</td>
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<td>Interest</td>
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<table>
<thead>
<tr>
<th><strong>Expenses</strong></th>
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<tbody>
<tr>
<td><strong>Personnel Expenses</strong></td>
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<tr>
<td>Salaries</td>
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<tr>
<td>Payroll Taxes</td>
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<tr>
<td>Benefits</td>
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<tr>
<td>Retirement Costs</td>
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<tr>
<td><strong>Meeting Expenses</strong></td>
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<td>Travel</td>
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<tr>
<td><strong>Operating Expenses</strong></td>
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<tr>
<td>Consultants &amp; Contracts</td>
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<td>Office Rent</td>
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<td>Office Costs</td>
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<tr>
<td>Depreciation</td>
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<td><strong>Total Operating Expenses</strong></td>
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<tr>
<td><strong>Total Direct Expenses</strong></td>
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<tr>
<td><strong>Indirect Expenses</strong></td>
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<tr>
<td><strong>Other Non-Operating Expenses</strong></td>
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<td><strong>Total Expenses</strong></td>
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<td><strong>Change in Assets</strong></td>
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<td><strong>Fixed Assets</strong></td>
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<tr>
<td>Depreciation</td>
</tr>
<tr>
<td>Computer &amp; Software CapEx</td>
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<tr>
<td>Furniture &amp; Fixtures CapEx</td>
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<tr>
<td>Equipment CapEx</td>
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<td>Leasehold Improvements</td>
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<tr>
<td><strong>(Incr)Dec in Fixed Assets</strong></td>
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<tr>
<td><strong>Allocation of Fixed Assets</strong></td>
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<tr>
<td><strong>Change in Fixed Assets</strong></td>
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<tr>
<td><strong>TOTAL CHANGE IN NET ASSETS</strong></td>
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Situation Awareness and Critical Infrastructure Protection

Program Scope and Functional Description
This Program Area is divided into two departments, Situation Awareness and Critical Infrastructure Protection. These departments are responsible for gathering and disseminating information regarding bulk power system vulnerabilities, system, and cyber events. Both departments also support the coordination of industry-wide exercises and drills undertaken in conjunction with governmental authorities. The Situation Awareness department and resource needs are described first, followed by a discussion of the Critical Infrastructure Protection department.

Situation Awareness

<table>
<thead>
<tr>
<th>Situation Awareness and Infrastructure Security</th>
<th>2011 Budget</th>
<th>2012 Budget</th>
<th>Increase (Decrease)</th>
</tr>
</thead>
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<td>25.50</td>
<td>(0.33)</td>
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<td>Other Non-Operating Expenses</td>
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<td>-</td>
<td>$(171,460)</td>
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<tr>
<td>Inc(Dec) in Fixed Assets</td>
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<td>150,865</td>
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<tr>
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<td>$15,228,623</td>
<td>$858,150</td>
</tr>
</tbody>
</table>

NERC Situation Awareness personnel work closely with situation awareness personnel at the Regional Entities and governmental authorities, including FERC, to share information regarding system events and risks to the reliability of the bulk power system using NERC’s secure alert system and other communications as appropriate. They also work closely with NERC’s Critical Infrastructure Protection (CIP) department regarding CIP and cyber information sharing.
In 2011, NERC initiated steps to implement a common platform for the collection and display of key system information from Reliability Coordinators. This platform allows NERC, the Regional Entities, and governmental authorities to collect and display key information with common forms and formats. The single approach supports industry by establishing a single data sharing process and protocol as opposed to multiple processes and protocols for NERC, Regions, and governmental authorities thereby eliminating duplication of efforts. The project is known as Situation Awareness for FERC, NERC, and Regional Entities (SAFNR). During 2012 SAFNR will continue to evolve to ensure the parameters monitored and display formatting support early understanding of bulk power system vulnerabilities.

The Situation Awareness Program area provides funding to support the North American Synchro-Phasor Initiative (NASPI), which was initiated following the August 14, 2003 Northeast blackout. These devices can provide system operators with a critical indication of the health of the bulk power system and help predict weakened areas of the system. A number of phasor measuring devices have been installed in the interconnections and data concentrators have been put in place. In 2010, NERC entered into a contract with the Grid Protection Alliance (GPA) to further advance and support the development and deployment of synchro-phasor technologies. In 2011, NERC and GPA entered into an amendment to that agreement which provides that a portion of NERC’s funding commitment will be used to support work GPA was awarded by the Department of Energy (DOE) in December, 2010, to develop a secure information exchange gateway for electric grid operations (the “SIEGate Grant”). This is in keeping with NERC’s strategy to promote additional third party funding of NASPI and leverage NERC’s investments where practical. In addition to DOE funding, other entities are also providing funding support permitting NERC to further leverage NERC’s NASPI investment. The primary objective of this project is to develop a secure and flexible “appliance” that will serve as the gateway for all types of real-time data exchanged between a utility control center and other control centers, utilities, and regulatory and oversight entities. The gateway appliance will be designed and built to resist cyber attacks, protect the confidentiality and integrity of a growing volume of real-time information being exchanged to assure the reliability of the bulk electric system, and inter-operate with existing and proposed data formats and networking technologies.

2012 Goals and Deliverables

- Ongoing support of SAFNR implementation, including implementation of redundant displays in the NERC Atlanta and DC offices
- Continued support of NASPI
- Refinements of Alerts processing to ensure comprehensive and timely review of developing Alerts
- Enhanced coordination of situational awareness functions with emergency response protocols
Resource Requirements

Personnel
No additional personnel are projected for this group during 2012. A slight reduction in personnel (.33 FTEs) is projected for this area due to 2011 personnel reductions.

Contractor Expenses
Overall funding for contractors and consultants to support the Situation Awareness department will remain relatively flat in 2012 compared to 2011, with a projected increase of approximately $43k. NERC’s 2012 Situation Awareness contractor expenses are primarily driven by ongoing contractual commitments in support of the SAFNR initiative and ongoing funding for GPA in connection with the NASPI initiative. The 2012 budgeted costs for SAFNR operations is $498.6k and is based on contractual commitments supporting SAFNR that were entered into in 2011 for SAFNR deployment, maintenance, and support. This is reduction of approximately $250k from the 2010 budget which substantially offsets the increase in budgeted funding for NASPI described in the next paragraph.

NERC’s 2011 budget assumed a 60 percent reduction in NASPI-related funding compared to NERC’s 2010 budget, with any incremental funding in 2011 paid from working capital reserves. NERC’s proposed 2011 budget to support the NASPI initiative has been increased by $300k to reflect known and projected funding requirements, including co-funding commitments in connection with the SEIGate Grant initiative, and represents a reduction of several hundred thousand dollars from NERC-projected funding in 2011, inclusive of commitments which will be funded through use of working capital reserves.

The Situation Awareness budget also includes ongoing funding for various NERC tools which NERC supports on behalf of reliability coordinators and other industry participants, as well as funding to support NERC’s secure alert system.

NERC’s 2012 budget in connection with the ES-ISAC includes funding for deployment and hosting of a communications portal to facilitate secure communications with governmental authorities and industry is budgeted under the Critical Infrastructure Protection department given its direct involvement and lead role with those communications.
Critical Infrastructure Protection

<table>
<thead>
<tr>
<th></th>
<th>2011 Budget</th>
<th>2012 Budget</th>
<th>Increase (Decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total FTEs</td>
<td>14.50</td>
<td>17.00</td>
<td>2.50</td>
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<td>$703,498</td>
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<td>Other Non-Operating Expenses</td>
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<tr>
<td>Total Funding Requirement</td>
<td>$6,258,762</td>
<td>$8,229,747</td>
<td>$1,970,985</td>
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</table>

Program Scope and Functional Description

The Critical Infrastructure Protection (CIP) department supports CIP standards initiatives, as well as CIP and cyber information sharing, incident analysis, alerts, system-level risk assessment, and enhanced coordination between industry and our governmental partners. As part of NERC’s overall Situation Awareness and Infrastructure Security Program activities, the NERC CIP department also operates and maintains the Electricity Sector Information Sharing and Analysis Center (ES-ISAC) to monitor the bulk power system and provide situation awareness leadership and coordination services to the electric industry. The ES-ISAC functions to send alerts and notifications to registered bulk power system entities which are developed through a strong partnership of federal technical partners, including Department of Homeland Security and the Department of Energy National Laboratories, and industry bulk power system subject matter experts. During 2012, NERC will be implementing significant improvements to the ES-ISAC.

The CIP department is helping NERC advance a number of actions to complement mandatory CIP standards and provide enhanced resilience for the grid. Through support of the Electricity Sub-Sector Coordinating Council (ESCC), NERC works with industry and governmental entities, including the Department of Energy, Department of Defense and Department of Homeland Security, to identify critical infrastructure protection concepts, processes and resources, as well as to facilitate information sharing about cyber vulnerabilities and threats. This type of public/private partnership is key to coordination and communication efforts on cyber security topics and initiatives. The CIP department is also leading NERC’s role in developing a North American cyber security exercise to assess NERC and electricity sector incident response plans, with primary emphasis on incident reporting, and the escalation process through the management chain of each participating entity. Situational awareness, collection and dissemination of cyber security incident information, and internal response capabilities will be exercised.
Improving the amount and quality of actionable security threat and vulnerability information available to industry is a priority for NERC and is reflected in a number of joint projects underway with DHS and DOD. NERC is working with DHS’ National Cybersecurity and Communications Integration Center on a Memorandum of Understanding (MOU) for bi-directional sharing of critical infrastructure protection information between the government and the electricity sector in North America. The MOU will result in cyber security data flow, analytical collaboration, and incident management activities across the spectrum of cyber security coordination to include detection, prevention, mitigation, and response/recovery.

The CIP department also supports NERC’s involvement with two significant DHS-affiliated public-private partnerships which include the Partnership for Critical Infrastructure Security (PCIS) and the Industrial Control Systems Joint Working Group (ICSJWG). The PCIS is the senior most policy coordination group between public and private sector organizations and the ICSJWG is a cross-sector industrial control systems working group that focuses on the areas of education, cross-sector strategic roadmap development, coordinated efforts on developing better vendor focus on security needs and cyber security policy issues.

NERC’s CIP department, is also engaged with DOE National Laboratories to further the level of awareness and expertise focused on cyber security, especially as it pertains to the bulk power system. NERC is working with DOE and the Pacific Northwest National Laboratory (PNNL) on developing certification guidelines for Smart Grid Cyber Operators and the Electric Sector Network Monitoring (ESNM) initiative. Similarly, NERC is working with the Idaho National Laboratory to promote the Cyber Security Evaluation Tool (CSET) for use within the electric sector.

Additionally, NERC is collaborating with DOE and the National Institute of Standards and Technology (NIST) to develop comprehensive cyber security risk management process guidelines for the entire electric grid, including the bulk power and distribution systems. This initiative is particularly important with the increasing availability of smart grid technologies. While the majority of technology associated with the smart grid is found within the distribution system, vulnerabilities realized within the distribution system could potentially impact the bulk power system.

2012 Goals and Key Deliverables
The following is a list of key 2012 deliverables for the CIP department:

- Continue enhancement of the ES-ISAC program first deployed over 10 years ago. ES-ISAC functions will include a portal for bi-directional information sharing with government and industry, rapid dissemination of threat and vulnerability information across the industry, a secure repository for security guidelines, incident, threat, and vulnerability, information, and an analytical capability to assess potential risks to reliability and develop mitigations for industry consideration.
• Continue collaboration with government agencies in the U.S. and Canada to develop more timely and actionable sanitization of classified information regarding threats to the bulk power system.

• Working jointly with Regional Entities, increase the transparency of CIP compliance processes and program results among regions by deploying shared procedures, training and tools; improve risk-based approaches for CIP auditing to optimize resource utilization; and promote a culture of compliance excellence through education, information, and incentives.

• Work with Regional Entities for more efficient monitoring of compliance with CIP standards by registered entities.

• Conduct security incident analysis and work with industry experts to evaluate, track, and identify lessons learned and security metrics that enhance the sector’s security posture.

• Provide administrative support to the Critical Infrastructure Protection Committee (CIP), support the ESCC, working groups and task forces serving the Standing Committees.

• Provide support to bulk power system entities in development of adequate cyber risk preparedness exercises.

• Apply resources to improve education and outreach related to both CIP standards compliance and general security risk management. The CIP department will partner with internal and external groups to offer advanced auditor training, CIP education for registered entities, and technical cyber security training for NERC, regions, and registered entity staff.

Resource Requirements

Personnel
Two CIP cyber security specialists will be added in 2012 to support additional increases in CIP Standards and security incident workload associated with ES-ISAC information sharing and risk management activities. The addition of these resources is required to further develop and implement CIP program risk management activities, meet federal coordination requirements in both the U.S. and Canada, and support the growing need for expert cyber security and CIP Standards subject matter expert support. These personnel will also assist the department in:

• Researching, analyzing, and disseminating information regarding significant cyber and physical security incidents.

• Conducting security focused risk management and security incident reporting analysis. The CIP cyber security specialists will support the ES-ISAC with event and incident data analysis, conducting quarterly analysis of all security-related incidents, and continue the development of incident descriptions, categories and measurements.

• Supporting access to operations center positions in the ICS-CERT and at the DHS National Incident Coordination Center in Washington D.C.
Contractor Expenses

The CIP program will require incremental contracting expenses to provide support and subject matter expertise in connection with several program initiatives and requirements in 2012, including:

- **Cyber Risk Preparedness Assessment (CRPA):** The CRPA is focused on bulk power system entities’ abilities to protect their cyber assets and improve preparedness regarding their cyber security postures. Consultant support is required to examine bulk power system entities’ ability to defend their information systems, deter and deny attacks against those systems, and respond to cyber attacks in a timely and efficient manner.

- **NIST/DOE Risk Management Project (RMP) support:** The RMP is a public-private collaboration to develop a cyber security risk management guideline that will enable organizations to proactively manage risk. The effort is being led by DOE in coordination with NIST and NERC, and in collaboration with representatives from across the public and private sectors and will require consultant support to provide training and broaden understanding of the project.

- **ESCC and CIPC Support:** Provide NERC with executive-level support and advice on strategic and policy matters related to critical infrastructure protection including support services to the ESCC, CIPC, and overall coordination of the various task force initiatives identified in the Coordinated Action Plan to implement the ESCC Critical Infrastructure Strategic Roadmap.

- **Internet Monitoring Support:** Consultant support is necessary to provide near real-time and historical analytical tool support that will identify cyber-attack trends affecting the electrical sector, including identification of compromised systems and a rapid malware analysis capability that will enhance computer network defense.

- **Cyber Forensics Support:** Consultant support for forensics response is necessary to assist industry in the event of a major cyber event. This is support will be on a retainer basis.

- **DHS CyberStorm IV Exercise Support:** The bi-annual DHS CyberStorm security exercise is a major evolution for the electricity sector and will require short term consultant support to interface with DHS and DHS exercise delivery vendors.

- **ES-ISAC:** The ES-ISAC is managed by NERC in collaboration with registered entities, NERC, Regions, vendors, suppliers, vulnerability researchers and government partners. The ES-ISAC leverages the knowledge, skills, and capabilities of industry and government partners to act as a primary communications and coordination mechanism for information sharing and analysis across the industry. Expert consultant support is necessary during the initial expansion of the ES-ISAC.
The total CIP Consultant and Contracts budget for 2012 represents an increase of approximately $415k over the 2011 CIP Consultant and Contract budget and is largely driven by funding requirements associated with the deployment of the ES-ISAC portal and communications infrastructure and the cyber security consulting support discussed above.
## Statement of Activities and Capital Expenditures

### 2011 Budget & Projection, and 2012 Budget

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<tbody>
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<tr>
<td>ERO Funding</td>
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<td>Testing Fees</td>
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<td>132,530</td>
<td>132,530</td>
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<tr>
<td>Miscellaneous</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Depreciation</td>
<td>45,884</td>
<td>45,884</td>
<td>0</td>
<td>1,500</td>
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</tr>
<tr>
<td><strong>Total Operating Expenses</strong></td>
<td>$4,719,992</td>
<td>$5,452,929</td>
<td>$732,936</td>
<td>$5,137,058</td>
<td>$417,066</td>
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<td><strong>Total Direct Expenses</strong></td>
<td>$10,789,468</td>
<td>$10,820,842</td>
<td>$31,373</td>
<td>$11,131,264</td>
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<td>Indirect Expenses</td>
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<td>$3,434,289</td>
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<td>$3,946,495</td>
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<td>Other Non-Operating Expenses</td>
<td>$171,460</td>
<td>-</td>
<td>(171,460)</td>
<td>-</td>
<td>(171,460)</td>
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<tr>
<td><strong>Total Expenses</strong></td>
<td>$14,394,977</td>
<td>$14,255,131</td>
<td>$139,846</td>
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<td>$682,781</td>
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<tr>
<td>Change in Assets</td>
<td>(24,504)</td>
<td>$181,750</td>
<td>206,254</td>
<td>$150,865</td>
<td>$175,369</td>
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<td>Fixed Assets</td>
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<tr>
<td>Depreciation</td>
<td>45,884</td>
<td>45,884</td>
<td>-</td>
<td>-</td>
<td>45,884</td>
</tr>
<tr>
<td>Computer &amp; Software CapEx</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td></td>
</tr>
<tr>
<td>Furniture &amp; Fixtures CapEx</td>
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<td>-</td>
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<tr>
<td>Equipment CapEx</td>
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<tr>
<td>Leasehold Improvements</td>
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<tr>
<td><strong>(Incr)Dec in Fixed Assets</strong></td>
<td>$45,884</td>
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<td>Allocation of Fixed Assets</td>
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<td>(844,289)</td>
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<td>(129,485)</td>
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<td>Change in Fixed Assets</td>
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<td>(798,405)</td>
<td>(822,909)</td>
<td>(150,865)</td>
<td>(175,369)</td>
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<td><strong>TOTAL CHANGE IN NET ASSETS</strong></td>
<td>0</td>
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Administrative Services

NERC’s Administrative Services area includes all business and administrative functions of the organization, including technical committees and member forums, executive, legal and regulatory, human resources, information technology, finance and accounting, and general expenses. The resource requirements and comparative budget information for each of these functions is described further below. Costs incurred for these services are allocated as an indirect expenses across NERC’s other program areas.

**Program Scope and Functional Description**

<table>
<thead>
<tr>
<th>Administrative Services (in whole dollars)</th>
<th>2011 Budget</th>
<th>2012 Budget</th>
<th>Increase (Decrease)</th>
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</thead>
<tbody>
<tr>
<td>Total FTEs</td>
<td>37.75</td>
<td>48.25</td>
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<td>$15,021,192</td>
<td>$20,197,232</td>
<td>$5,176,040</td>
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<td>$93,519</td>
<td>$772,090</td>
<td>$678,571</td>
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<td>Less: Other Funding Sources</td>
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<td>Total Allocation to Statutory Programs as Indirect Expenses</td>
<td>$15,114,711</td>
<td>$20,969,322</td>
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<td>Funding Requirement for Working Capital</td>
<td>$5,000,000</td>
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</table>
Technical Committees and Members’ Forum Program

<table>
<thead>
<tr>
<th>Technical Committees and Member Forums (in whole dollars)</th>
<th>2011 Budget</th>
<th>2012 Budget</th>
<th>Increase (Decrease)</th>
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</thead>
<tbody>
<tr>
<td>Total FTEs</td>
<td>-</td>
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</tr>
<tr>
<td>Total Direct Expenses</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Inc(Dec) in Fixed Assets</td>
<td>$</td>
<td>$</td>
<td>$</td>
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<tr>
<td>Working Capital Requirement</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

**Program Scope and Functional Description**

In 2010, the description of and budget for items reflected in this program area was limited to the Transmission Owners and Operators Forum. The 2011 budget reflected the removal of the Transmission Owners and Operators Forum (“TOOF”) from NERC’s Business Plan and Budget. TOOF ceased operations at the end of 2009 and its leadership formed a successor organization, the North American Transmission Forum, Inc., which operates independently from NERC. While NERC management and staff will continue to interact with and support numerous reliability related forums, NERC’s 2012 budget does not contain specific funding for any additional forum activities.
General and Administrative

<table>
<thead>
<tr>
<th>General and Administrative (in whole dollars)</th>
<th>2011 Budget</th>
<th>2012 Budget</th>
<th>Increase (Decrease)</th>
</tr>
</thead>
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<tr>
<td>Total FTEs</td>
<td>7.00</td>
<td>6.75</td>
<td>(0.25)</td>
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<tr>
<td>Total Direct Expenses</td>
<td>$ 5,296,384</td>
<td>$ 7,312,619</td>
<td>$ 2,016,235</td>
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<tr>
<td>Inc(Dec) in Fixed Assets</td>
<td>$ (95,286)</td>
<td>$ -</td>
<td>$ 95,286</td>
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<tr>
<td>Working Capital Requirement</td>
<td>$ 5,000,000</td>
<td>$ -</td>
<td>$ (5,000,000)</td>
</tr>
</tbody>
</table>

Program Scope and Functional Description
The General and Administrative area is responsible for the administration and general management of the organization. Expenses allocated in this area include office rent, personnel and related costs of the CEO, a senior advisor to the CEO, the CEO’s executive assistant, communications and public relations staff, and costs related to the Board of Trustees.

2012 Assumptions and Cost Impacts
Total direct expenses for the General and Administrative area are increasing by approximately $2.0M, the majority of which is a result of an increase rent expense due to the leasing of office space needed to accommodate existing and future staffing needs, as well as short-term costs associated with existing leases as NERC transitions to its new headquarters in Atlanta and a new location in Washington, D.C. given space limitations at its current Washington, D.C. location. The relocation of NERC’s headquarters to Atlanta and the expansion of its Washington, D.C. office are part of a comprehensive office relocation strategy adopted in 2010 to improve the long-term efficiency and cost effectiveness of overall ERO operations. This strategy remains on track.

Working Capital Reserves — In its 2010 budget, NERC eliminated funding for a cash working capital reserve in order to control the overall funding increase over 2009. As part of its 2011 Business Plan and Budget, NERC believed it was prudent to reestablish this reserve in light of the growth in the size of the organization, its cash flow requirements and the potential for unanticipated short-term resource needs driven by potential governmental directives, industry needs or litigation that could potentially arise in connection with enforcement actions. NERC’s 2011 budget included $5M in working capital reserve funding, a significant portion of which was required to strengthen NERC’s balance sheet due to the impact of accrual accounting adjustments on the company’s 2009 year-end working capital balance. NERC is currently projecting it will have a 2011 yearend working capital balance of approximately $1.4M. In addition, while under generally accepted accounting principles, NERC is required to reflect the amortization of the leasehold for Atlanta; actual rent expense is abated for a significant portion of 2012 thereby enhancing NERC’s free cash flow.
In addition, NERC still has in place a $4M line of credit. Based on these three factors, NERC is not at this time expecting to request additional funding in 2012 to restore or further increase working capital. Management will continue to evaluate its working capital needs throughout the business plan and budget review process based on updated year-end working capital projections.
## Statement of Activities and Capital Expenditures
### 2011 Budget & Projection, and 2012 Budget

**General and Administrative**

<table>
<thead>
<tr>
<th></th>
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</thead>
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<td>Funding</td>
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<tr>
<td>ERO Funding</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NERC Assessments</td>
<td>$5,000,000</td>
<td>$5,000,000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Penalty Sanctions</td>
<td>-</td>
<td>-</td>
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<tr>
<td><strong>Total NERC Funding</strong></td>
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<td>Membership Dues</td>
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<tr>
<td>Testing Fees</td>
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<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Services &amp; Software</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Workshops</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Interest</td>
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<td>15,000</td>
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<tr>
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<td>$5,018,486</td>
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<tr>
<td>Personnel Expenses</td>
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<td>$1,523,944</td>
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<td>(3,784)</td>
<td>71,858</td>
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<td>194,577</td>
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<td>221,778</td>
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<td>171,682</td>
<td>(71,110)</td>
<td>264,110</td>
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<td><strong>Total Personnel Expenses</strong></td>
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<td>(83,891)</td>
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<td>Meeting Expenses</td>
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<td>Meetings</td>
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<td>$255,000</td>
<td>30,000</td>
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<td><strong>Total Meeting Expenses</strong></td>
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<td>590,786</td>
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<td>Operating Expenses</td>
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<td></td>
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<tr>
<td>Consultants &amp; Contracts</td>
<td>-</td>
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<td>2,250</td>
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<td>Professional Services</td>
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<td>1,225,000</td>
<td>45,000</td>
<td>1,130,000</td>
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<td>Miscellaneous</td>
<td>4,000</td>
<td>4,000</td>
<td>-</td>
<td>10,000</td>
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<tr>
<td><strong>Total Operating Expenses</strong></td>
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<td>$3,501,450</td>
<td>794,515</td>
<td>3,924,757</td>
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<td><strong>Total Direct Expenses</strong></td>
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<td>$6,055,343</td>
<td>758,958</td>
<td>7,312,619</td>
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<tr>
<td>Indirect Expenses</td>
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<td>$ (6,042,629)</td>
<td>$ (746,244)</td>
<td>(7,312,619)</td>
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<tr>
<td>Other Non-Operating Expenses</td>
<td>-</td>
<td>$5,772</td>
<td>$5,772</td>
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<td><strong>Total Expenses</strong></td>
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<td>$18,486</td>
<td>$18,486</td>
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<tr>
<td>Change in Assets</td>
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<td>$5,000,000</td>
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<td>(0)</td>
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<tr>
<td>Fixed Assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>(95,286)</td>
<td>(95,286)</td>
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<td>-</td>
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<tr>
<td>Computer &amp; Software CapEx</td>
<td>-</td>
<td>1,503,740</td>
<td>1,503,740</td>
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<td>Furniture &amp; Fixtures CapEx</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Equipment CapEx</td>
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</tr>
<tr>
<td>Leasehold Improvements</td>
<td>54,164</td>
<td>54,164</td>
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<td><strong>(Incr)Dec in Fixed Assets</strong></td>
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<td>$1,462,618</td>
<td>$1,557,904</td>
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<td>Allocation of Fixed Assets</td>
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<td>1,557,904</td>
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<tr>
<td>Change in Fixed Assets</td>
<td>-</td>
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<tr>
<td><strong>TOTAL CHANGE IN NET ASSETS</strong></td>
<td>$5,000,000</td>
<td>$5,000,000</td>
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</table>
Legal and Regulatory

Program Scope and Functional Description
The Legal and Regulatory department provides legal, regulatory, and governmental relations support to the organization. Expenses allocated to this department include: General Counsel, attorneys, and Canadian governmental affairs.

2012 Assumptions and Cost Impacts
This department’s workload is largely derivative of and supports the work of several of the NERC’s key program areas. Increasing demands are being placed on this group from three primary areas: compliance operations, investigations, and standards. In the compliance operations area, there are increased requests for legal participation on significant audits. In the investigations area, there are increasing calls for legal participation on investigation teams. In standards, there are increasing calls for legal participation with drafting teams, drafting assistance and quality review of standards projects. In addition, recent FERC orders indicate a need for increased resources devoted to the development of filings for approval of standards.

In addition, this department is also responsible for providing a wide range of legal support to the NERC management team regarding antitrust, corporate, commercial, insurance, contract, employment, real estate, copyright, tax, legislation and other legal matters, the needs for which are growing as the NERC and the ERO mature and legal support needs become broader and more complex.

Two attorneys were added in 2011 and two attorneys and additional administrative support will be added in 2012 to address this department’s significant workload needs and prevent it from becoming a bottleneck. Professional services and consulting costs were also increased to reflect increased volume and complexity of required filings with governmental authorities, as well as corporate matters arising from day to day operations.

<table>
<thead>
<tr>
<th></th>
<th>2011 Budget</th>
<th>2012 Budget</th>
<th>Increase (Decrease)</th>
</tr>
</thead>
<tbody>
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<td>Total FTEs</td>
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</tr>
<tr>
<td>Working Capital Requirement</td>
<td>$ (0)</td>
<td>$</td>
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## Statement of Activities and Capital Expenditures
### 2011 Budget & Projection, and 2012 Budget

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>ERO Funding</td>
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<td></td>
</tr>
<tr>
<td>NERC Assessments</td>
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<td>$ -</td>
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</tr>
<tr>
<td>Penalty Sanctions</td>
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<td>Membership Dues</td>
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<tr>
<td>Testing Fees</td>
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<tr>
<td>Services &amp; Software</td>
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<td>Workshops</td>
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<tr>
<td>Interest</td>
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<td>-</td>
<td>-</td>
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</tr>
<tr>
<td><strong>Total Funding</strong></td>
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</table>

### Expenses

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<tr>
<td>Salaries</td>
<td>$ 1,400,014</td>
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<td>Benefits</td>
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<tr>
<td>Retirement Costs</td>
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<td>331,372</td>
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<td><strong>Total Personnel Expenses</strong></td>
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<td>$ 2,201,067</td>
<td>$ 3,055,912</td>
<td>$ 1,206,657</td>
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<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Meetings</td>
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<td>$ 5,000</td>
<td>$ 6,000</td>
<td>$ 1,000</td>
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<tr>
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<td>82,000</td>
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<td>Conference Calls</td>
<td>1,500</td>
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<tr>
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<td>$ 57,000</td>
<td>$ 81,500</td>
<td>$ 91,200</td>
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### Change in Assets

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<tr>
<td>Computer &amp; Software CapEx</td>
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<tr>
<td>Furniture &amp; Fixtures CapEx</td>
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<tr>
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| Allocation of Fixed Assets    | $ -         | -               | -           | -                          | -                           |

### Change in Fixed Assets

| TOTAL CHANGE IN NET ASSETS    | $ (0)       | $ -             | $ 0         | $ -                        | $ 0                         |

---

**2012 Business Plan and Budget**
Approved by Board of Trustees on [August 5], 2011
Information Technology

<table>
<thead>
<tr>
<th>Information Technology (in whole dollars)</th>
<th>2011 Budget</th>
<th>2012 Budget</th>
<th>Increase (Decrease)</th>
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Program Scope and Functional Description

Information Technology (IT) is a strategic, mission-enabling function within NERC. IT is responsible for the design, procurement, implementation, and management of NERC’s technology infrastructure, including network servers, databases, applications, and telecommunications, and for implementing and managing logical and physical security controls to protect critical business assets. Application development and similar technology initiatives are managed by IT staff in close coordination with relevant program staff, consultants, and vendors. Staff in this program area also support, manage, and maintain a number of reliability tools and related infrastructure on behalf of the industry.

Recognizing the role of technology in the success of the ERO and in response to stakeholder feedback, NERC has placed a renewed emphasis in the IT area. Executive leadership has as one of its objectives to establish an integrated IT infrastructure and systems across common lines of business within the ERO enterprise. To achieve this objective, additional capital investments will be necessary. A new ERO-enterprise model for IT policy setting, decision-making and infrastructure deployment is critical to achieving ERO goals and objectives.

During 2011, NERC is relocating its primary IT backbone support infrastructure to a hosted, third-party data center to improve infrastructure availability and reliability. This investment was funded out of a combination of budgeted funds and working capital reserves.

2012 Goals and Key Deliverables

1. Establish a project management office to ensure the development and timely deployment of tools and technology that are aligned with ERO goals and priorities.

2. With the Regional Entities and the assistance of external consulting support, deploy a common, enterprise-wide technology platform that embraces the requirements of Regions and stakeholders for reliable, secure, efficient, and cost-effective systems and services.
3. Introduce incremental improvements to and integrate the compliance reporting and tracking systems into NERC’s ERO IT platform to accommodate new business requirements and ensure sustained operability. This initiative commenced in 2011 and will carry over into 2012.

4. Replace the Standards Registered Ballot Body tool to enhance usability, performance and reliability.

5. Support enhancements to the performance metrics data management system, and improvements to the Spare Equipment Database.

6. Enhance NERC’s web site to add functionality and improve user satisfaction. Continue to introduce new functionality supported by NERC’s SharePoint platform, including new collaboration tools and automated content management in the areas of Standards, Reliability Assessments, Events Analysis and Compliance areas.

Resource Requirements
To accomplish the goals and objectives described above, additional resources will be required as further described below.

Personnel
Additional IT personnel will be required to meet the long-term goals and objectives of the ERO. Specifically, IT requires additional dedicated staff to manage NERC’s technology projects and IT infrastructure. Two additional personnel will be added in 2012 (1.75 FTEs due to timing of hiring) and include:

- Project Manager — This position will be responsible for managing all stages of complex IT projects including business analysis and design, budgeting, scheduling and status tracking, and final acceptance testing. The number of projects has grown significantly during the last several years and will continue to do so as the ERO IT platform becomes fully operational. Bringing additional dedicated project management expertise to bear will be essential to meeting the ERO’s IT related goals and objectives.

- Transitional Support — An additional FTE will be added to provide support to NERC’s IT group as it transitions certain critical IT support personnel who will not be relocating in connection with the closure of NERC’s Princeton headquarters.

Contractor Expenses
The 2012 IT contractor and consulting budget is approximately a $580k increase from 2011 after taking into account the transfer to IT of approximately $515K in funding for IT projects from the Standards and Compliance Operations areas. The consolidation of the funding and oversight of IT projects is part of an ongoing initiative to better manage NERC’s IT investments and ensure integration in an overall strategic long term and sustainable ERO enterprise IT platform. Included in the $580k increase is $300k in additional funding over 2011 levels to expedite ERO enterprise IT platform development and deployment.
Office Costs
(Refer to “Internet” on Table B-7, page 103) Other increases in costs are primarily personnel driven, and include the cost of computers, software and computer supplies for added FTEs; the cost of telephone expense, which includes cell phones and mobile broadband service; and in increase in software maintenance agreements.
### Statement of Activities and Capital Expenditures

#### 2011 Budget & Projection, and 2012 Budget

**Information Technology**

<table>
<thead>
<tr>
<th>Funding</th>
<th>Variance</th>
<th>Variance</th>
</tr>
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<tbody>
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<td>ERO Funding</td>
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<td>NERC Assessments</td>
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<td>Penalty Sanctions</td>
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<tr>
<td>Total NERC Funding</td>
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<td>Testing Fees</td>
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<td>Services &amp; Software</td>
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<td>Workshops</td>
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</tr>
<tr>
<td>Total Funding</td>
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#### Expenses

**Personnel Expenses**

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**Meeting Expenses**

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**Operating Expenses**

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<td>Consultants &amp; Contracts</td>
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<tr>
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**Indirect Expenses**

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#### Change in Assets

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#### Fixed Assets

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<td>(515,445)</td>
<td>(515,445)</td>
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<tr>
<td>Computer &amp; Software CapEx</td>
<td>665,200</td>
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<td>Furniture &amp; Fixtures CapEx</td>
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<tr>
<td>(Incr)Dec in Fixed Assets</td>
<td>$(190,555)</td>
<td>$(2,666,326)</td>
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<tr>
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<td>$ 190,555</td>
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#### Change in Fixed Assets

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**TOTAL CHANGE IN NET ASSETS**

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Human Resources

Program Scope and Functional Description
The Human Resources area manages all of NERC’s human resources functions, including new-hires, benefits, and employee functions. This area also oversees NERC’s employee performance appraisal and incentive structure process.

2012 Goals and Objectives
- Recruit and retain qualified employees to fulfill the activities of the ERO.
- Provide training/staff development activities.
- Ongoing review of compensation and benefits.
- Continue to expand Human Resources Information System, which was rolled out in 2010 to facilitate the tracking of employee information and records.

Resource Requirements

Personnel
The conversion of a part-time to full-time position to provide support for benefits administration and other department services to employees results in the addition of .5 FTEs to this department in 2012. This need is driven by the human resources support needs of NERC’s larger employee base.

Contractor Expenses
Contractor and consultant expense is projected at $50k lower than 2011 due to the transfer of funding for certain training support to the Training and Education program area.
## Statement of Activities and Capital Expenditures

**2011 Budget & Projection, and 2012 Budget**

### Human Resources

<table>
<thead>
<tr>
<th>Funding</th>
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<th>2011 Projection</th>
<th>Variance</th>
<th>2012 Budget</th>
<th>Variance</th>
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<td>Services &amp; Software</td>
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### Expenses

**Personnel Expenses**

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<th>2011 Projection</th>
<th>Variance</th>
<th>2012</th>
<th>Variance</th>
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**Meeting Expenses**

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<tr>
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<th>2011</th>
<th>2011 Projection</th>
<th>Variance</th>
<th>2012</th>
<th>Variance</th>
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</thead>
<tbody>
<tr>
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<td>$ 8,600</td>
<td>$ 26,600</td>
<td>$ 18,000</td>
<td>$ 18,985</td>
<td>$ 10,385</td>
</tr>
</tbody>
</table>

**Operating Expenses**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2011 Projection</th>
<th>Variance</th>
<th>2012</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultants &amp; Contracts</td>
<td>$ 250,000</td>
<td>$ 250,000</td>
<td>-</td>
<td>$ 200,000</td>
<td>(50,000)</td>
</tr>
<tr>
<td>Office Rent</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Office Costs</td>
<td>10,970</td>
<td>10,970</td>
<td>-</td>
<td>13,094</td>
<td>2,124</td>
</tr>
<tr>
<td>Professional Services</td>
<td>14,854</td>
<td>14,854</td>
<td>0</td>
<td>5,000</td>
<td>(9,854)</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>709</td>
<td>709</td>
<td>-</td>
<td>3,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Total Operating Expenses</td>
<td>$ 275,824</td>
<td>$ 276,533</td>
<td>$ 709</td>
<td>$ 221,094</td>
<td>$ (54,731)</td>
</tr>
</tbody>
</table>

**Total Direct Expenses**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2011 Projection</th>
<th>Variance</th>
<th>2012</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 1,241,500</td>
<td>$ 1,528,186</td>
<td>$ 286,687</td>
<td>$ 1,337,294</td>
<td>$ 95,795</td>
<td></td>
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</table>

**Indirect Expenses**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2011 Projection</th>
<th>Variance</th>
<th>2012</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ (1,241,500)</td>
<td>$ (1,528,186)</td>
<td>$ (286,687)</td>
<td>$ (1,337,294)</td>
<td>$ (95,795)</td>
<td></td>
</tr>
</tbody>
</table>

**Other Non-Operating Expenses**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2011 Projection</th>
<th>Variance</th>
<th>2012</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
</tbody>
</table>

**Total Expenses**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2011 Projection</th>
<th>Variance</th>
<th>2012</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ -</td>
<td>$ -</td>
<td>$ (0)</td>
<td>$ -</td>
<td>$ (0)</td>
<td>$ (0)</td>
</tr>
</tbody>
</table>

**Change in Assets**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2011 Projection</th>
<th>Variance</th>
<th>2012</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ -</td>
<td>$ -</td>
<td>$ 0</td>
<td>$ -</td>
<td>$ 0</td>
<td>$ 0</td>
</tr>
</tbody>
</table>

**Fixed Assets**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2011 Projection</th>
<th>Variance</th>
<th>2012</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Computer &amp; Software CapEx</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Furniture &amp; Fixtures CapEx</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Equipment CapEx</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Leasehold Improvements</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**(Incr)Dec in Fixed Assets**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2011 Projection</th>
<th>Variance</th>
<th>2012</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
</tbody>
</table>

**Allocation of Fixed Assets**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2011 Projection</th>
<th>Variance</th>
<th>2012</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
</tbody>
</table>

**Change in Fixed Assets**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2011 Projection</th>
<th>Variance</th>
<th>2012</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL CHANGE IN NET ASSETS**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2011 Projection</th>
<th>Variance</th>
<th>2012</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ -</td>
<td>$ -</td>
<td>$ 0</td>
<td>$ -</td>
<td>$ 0</td>
<td>$ 0</td>
</tr>
</tbody>
</table>

---

2012 Business Plan and Budget
Approved by Board of Trustees on [August 5], 2011
Finance and Accounting

NERC’s Finance and Accounting area manages all finance and accounting functions, including employee payroll, 401(k) plan, travel and expense reporting, monthly financial reporting, sales and use tax, meeting/events planning and services, insurance, internal auditing, and facilities management. This area also holds primary responsibility for the development of the annual business plan and budget, as well as NERC’s proposed ERO risk management framework.

Resource Requirements

Personnel

Two FTEs have been added to the Finance and Accounting area for the establishment of a Risk Management framework and support function. NERC’s risk management program will focus on NERC’s compliance with its internal operating procedures and controls, as well as corporate ethics policies, codes of conduct, conflicts of interest and reputational risk factors. The program will also monitor and evaluate compliance by the ERO enterprise (i.e., NERC and the eight Regional Reliability Entities) with applicable rules of procedure, including but not limited to the compliance monitoring and enforcement program requirements, standards development plan, and applicable FERC and other governmental authorizations, regulations and orders. The evaluation of bulk power system reliability risks is outside the scope of this framework and will continue to be overseen by the Reliability Assessment and Performance Analysis Program Area, Events Analysis and Investigations group and other applicable operating areas. Management believes the separate staffing of this function should enhance overall ERO risk management processes and controls and improve the efficiency and costs of performing audits of NERC, as well as the Regional Entities, compared to the inefficiency and costs at both the NERC and Regional Entity level of using a matrix management approach with existing NERC resources to oversee these audit and risk management functions and relying more heavily on outside auditors.

Program Scope and Functional Description

<table>
<thead>
<tr>
<th>Accounting and Finance (in whole dollars)</th>
<th>2011 Budget</th>
<th>2012 Budget</th>
<th>Increase (Decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total FTEs</td>
<td>6.50</td>
<td>10.00</td>
<td>3.50</td>
</tr>
<tr>
<td>Total Direct Expenses</td>
<td>$1,209,181</td>
<td>$2,040,702</td>
<td>$831,521</td>
</tr>
<tr>
<td>Inc(Dec) in Fixed Assets</td>
<td>$(1,750)</td>
<td>$</td>
<td>$1,750</td>
</tr>
<tr>
<td>Working Capital Requirement</td>
<td>$(          )</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

| 2012 Business Plan and Budget | Approved by Board of Trustees on [August 5], 2011 |

<table>
<thead>
<tr>
<th>2011 Budget</th>
<th>2012 Budget</th>
<th>Increase (Decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total FTEs</td>
<td>6.50</td>
<td>10.00</td>
</tr>
<tr>
<td>Total Direct Expenses</td>
<td>$1,209,181</td>
<td>$2,040,702</td>
</tr>
<tr>
<td>Inc(Dec) in Fixed Assets</td>
<td>$(1,750)</td>
<td>$</td>
</tr>
<tr>
<td>Working Capital Requirement</td>
<td>$(          )</td>
<td>$</td>
</tr>
</tbody>
</table>
to perform audits.\(^6\) Personnel within this group will work closely with existing program area staff, including the audit staff of the Compliance Operations department.

The remaining 1.5 FTEs reflect transfers from other departments and the conversion of a part time to full time position during 2011.

**Contractor Expenses**

Funding for outside auditors retained to support the Compliance Operations regional entity audits have also been transferred to the finance and accounting area to support the risk management function. The budget for these auditors is the same level as in the 2011 budget.

---

\(^6\) For example, over the past few years NERC spent approximately $1M on an outside auditor to perform audits of NERC and Regional Entities. The auditors were managed by existing compliance staff on top of their normal job functions. Considerable time was spent in educating the audit firm regarding the compliance framework and requirements. Each Regional Entity also had to devote considerable resources to these audits. NERC management believes there were clear process inefficiencies and resulting additional costs with this approach compared to staffing this function in house with some targeted outside support.
# Statement of Activities and Capital Expenditures

## 2011 Budget & Projection, and 2012 Budget

### Finance and Accounting

<table>
<thead>
<tr>
<th>Funding</th>
<th>2011 Budget</th>
<th>2011 Projection</th>
<th>2012 Budget</th>
<th>Variance 2012 Budget v 2011 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERO Funding</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td>Total NERC Funding</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries</td>
<td>$ 772,260</td>
<td>$ 880,096</td>
<td>$ 107,836</td>
<td>$ 1,144,844</td>
</tr>
<tr>
<td>Payroll Taxes</td>
<td>46,591</td>
<td>50,521</td>
<td>3,931</td>
<td>72,626</td>
</tr>
<tr>
<td>Benefits</td>
<td>$ 130,997</td>
<td>108,870</td>
<td>(22,127)</td>
<td>149,257</td>
</tr>
<tr>
<td>Retirement Costs</td>
<td>111,483</td>
<td>120,229</td>
<td>8,746</td>
<td>162,735</td>
</tr>
<tr>
<td>Total Personnel Expenses</td>
<td>$ 1,061,331</td>
<td>$ 1,159,716</td>
<td>$ 98,386</td>
<td>$ 1,529,462</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meeting Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meetings</td>
<td>$ 4,000</td>
<td>$ 4,000</td>
<td>-</td>
<td>$ 500</td>
</tr>
<tr>
<td>Travel</td>
<td>25,500</td>
<td>60,000</td>
<td>34,500</td>
<td>50,000</td>
</tr>
<tr>
<td>Conference Calls</td>
<td>1,200</td>
<td>1,200</td>
<td>-</td>
<td>1,850</td>
</tr>
<tr>
<td>Total Meeting Expenses</td>
<td>$ 30,700</td>
<td>$ 65,200</td>
<td>$ 34,500</td>
<td>$ 52,350</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consultants &amp; Contracts</td>
<td>$ 5,000</td>
<td>$ 5,000</td>
<td>-</td>
<td>$ 325,000</td>
</tr>
<tr>
<td>Office Rent</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Office Costs</td>
<td>10,400</td>
<td>10,400</td>
<td>-</td>
<td>8,790</td>
</tr>
<tr>
<td>Professional Services</td>
<td>100,000</td>
<td>100,000</td>
<td>-</td>
<td>125,000</td>
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<tr>
<td>Miscellaneous</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Depreciation</td>
<td>1,750</td>
<td>1,750</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total Operating Expenses</td>
<td>$ 117,150</td>
<td>$ 117,150</td>
<td>-</td>
<td>$ 458,890</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Expenses</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td>Change in Assets</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 0</td>
<td>$ -</td>
</tr>
<tr>
<td>Fixed Assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>(1,750)</td>
<td>(1,750)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Computer &amp; Software CapEx</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Furniture &amp; Fixtures CapEx</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Equipment CapEx</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Leasehold Improvements</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(Incr)Dec in Fixed Assets</td>
<td>$ 1,750</td>
<td>$ 1,750</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Allocation of Fixed Assets</td>
<td>$ (1,750)</td>
<td>$ (1,750)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Change in Fixed Assets</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL CHANGE IN NET ASSETS</td>
<td>$ -</td>
<td>$ -</td>
<td>$ 0</td>
<td>$ -</td>
</tr>
</tbody>
</table>

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2012 Business Plan and Budget

Approved by Board of Trustees on [August 5], 2011

67
## Reserve Balance

### Table B-1

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Working Capital Reserve (Deficit), December 31, 2010</td>
<td>789,862</td>
</tr>
<tr>
<td>Plus: 2011 Funding (from LSEs or designees)</td>
<td>51,281,965</td>
</tr>
<tr>
<td>Plus: 2011 Other funding sources</td>
<td>2,349,054</td>
</tr>
<tr>
<td>Less: 2011 Projected expenses &amp; capital expenditures</td>
<td>(53,043,482)</td>
</tr>
<tr>
<td>Projected Working Capital Reserve (Deficit), December 31, 2011</td>
<td><strong>1,377,399</strong></td>
</tr>
<tr>
<td>Working Capital Reserve, December 31, 2011</td>
<td><strong>1,377,399</strong></td>
</tr>
<tr>
<td>Minus: Projected Working Capital Reserve, December 31, 2011</td>
<td>1,377,399</td>
</tr>
<tr>
<td>Increase(decrease) in funding requirement to achieve Working Capital Reserve</td>
<td><strong>0</strong></td>
</tr>
<tr>
<td>2012 Expenses and Capital Expenditures</td>
<td>56,627,036</td>
</tr>
<tr>
<td>Less: Penalty Sanctions</td>
<td></td>
</tr>
<tr>
<td>Less: Other Funding Sources</td>
<td>(2,446,000)</td>
</tr>
<tr>
<td>Adjustment to achieve desired Working Capital Reserve</td>
<td>-</td>
</tr>
<tr>
<td>2012 NERC Assessment</td>
<td><strong>54,181,036</strong></td>
</tr>
</tbody>
</table>

1. On xxxx,xx,xxxx, the Finance and Audit Committee of the NERC Board of Trustees approved a desired working capital reserve of $x,xxx,xxx
2. Represents collections on or prior to June 30, 2011.
Breakdown by Statement of Activity Sections
The following detailed schedules are in support of the consolidated Statement of Activities on page 24. All significant variances have been disclosed by program area in the preceding pages.

Penalty Sanctions
Penalty monies received prior to June 30, 2011 are to be used to offset assessments in the 2012 Budget, as documented in the NERC Policy – Accounting, Financial Statement and Budgetary Treatment of Penalties Imposed and Received for Violations of Reliability Standard, as well as Section 1107 of the Rules of Procedure. Penalty monies received from July 1, 2011 through June 30, 2012 will be used to offset assessments in the 2013 Budget.

All penalties received prior to June 30, 2011 are detailed below, including the amount and date received.

Allocation Method: Penalty sanctions received have been allocated to the following statutory programs to reduce assessments: Reliability Standards; Compliance Monitoring and Enforcement and Organization Registration and Certification; Reliability Assessments and Performance Analysis; Training, Education and Operator Certification; and Situational Awareness and Infrastructure Security. Penalty sanctions are allocated based upon the number of FTEs in the Program divided by the aggregate total FTEs in the Programs receiving the allocation.

Table B-2

<table>
<thead>
<tr>
<th>Penalty Sanctions Received On or Prior to June 30, 2011</th>
<th>Date Received</th>
<th>Amount Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Penalties Received</td>
<td></td>
<td>$ -</td>
</tr>
</tbody>
</table>

2012 Business Plan and Budget
Approved by Board of Trustees on [August 5], 2011
## Supplemental Funding

### Table B-3

<table>
<thead>
<tr>
<th>Outside Funding Breakdown By Program (Excluding Penalty Sanction)</th>
<th>Budget 2011</th>
<th>Projection 2011</th>
<th>Budget 2012</th>
<th>Variance 2012 Budget v 2011 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance Monitoring, Enforcement &amp; Org. Registration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous - CEA function in WECC</td>
<td>$ 150,000</td>
<td>$ 26,903</td>
<td>-</td>
<td>$(150,000)</td>
</tr>
<tr>
<td>Total</td>
<td>$ 150,000</td>
<td>$ 26,903</td>
<td>-</td>
<td>$(150,000)</td>
</tr>
<tr>
<td>Reliability Assessment and Performance Analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$ 250,000</td>
<td>$ 250,000</td>
<td>$ 250,000</td>
<td>-</td>
</tr>
<tr>
<td>Training and Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testing Fees and Certificate Renewals</td>
<td>$ 1,340,000</td>
<td>$ 1,340,000</td>
<td>$ 1,461,000</td>
<td>$ 121,000</td>
</tr>
<tr>
<td>CEH Fees</td>
<td>$ 600,000</td>
<td>$ 600,000</td>
<td>$ 600,000</td>
<td>-</td>
</tr>
<tr>
<td>Workshops</td>
<td>$ 92,500</td>
<td>$ 117,151</td>
<td>$ 115,000</td>
<td>$ 22,500</td>
</tr>
<tr>
<td>Total</td>
<td>$ 2,032,500</td>
<td>$ 2,057,151</td>
<td>$ 2,176,000</td>
<td>$ 143,500</td>
</tr>
<tr>
<td>Situation Awareness and Infrastructure Security</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIST Royalties</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td>TSIN Fees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td>General and Administrative</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest Income</td>
<td>$ 12,000</td>
<td>$ 15,000</td>
<td>$ 20,000</td>
<td>$ 8,000</td>
</tr>
<tr>
<td>Total</td>
<td>$ 12,000</td>
<td>$ 15,000</td>
<td>$ 20,000</td>
<td>$ 8,000</td>
</tr>
<tr>
<td>Total Outside Funding</td>
<td>$ 2,444,500</td>
<td>$ 2,349,054</td>
<td>$ 2,446,000</td>
<td>$ 1,500</td>
</tr>
</tbody>
</table>

### Explanation of Significant Variances – 2012 Budget versus 2011 Budget

[To be included in next draft]
### Personnel Expenses

#### Table B-4

<table>
<thead>
<tr>
<th>Personnel Expenses</th>
<th>Budget 2011</th>
<th>Projection 2011</th>
<th>Budget 2012</th>
<th>2012 Budget v 2011 Budget</th>
<th>Variance %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Salaries</td>
<td>$21,095,939</td>
<td>$21,237,276</td>
<td>$26,032,145</td>
<td>$4,936,206</td>
<td>23.4%</td>
</tr>
<tr>
<td>Total Payroll Taxes</td>
<td>1,285,299</td>
<td>1,164,219</td>
<td>1,587,437</td>
<td>302,138</td>
<td>23.5%</td>
</tr>
<tr>
<td>Total Benefits</td>
<td>3,263,692</td>
<td>2,880,286</td>
<td>3,320,182</td>
<td>56,490</td>
<td>1.7%</td>
</tr>
<tr>
<td>Total Retirement</td>
<td>2,977,801</td>
<td>2,889,123</td>
<td>3,652,655</td>
<td>674,854</td>
<td>22.7%</td>
</tr>
<tr>
<td><strong>Total Personnel Costs</strong></td>
<td><strong>$28,622,731</strong></td>
<td>$28,170,904</td>
<td><strong>$34,592,419</strong></td>
<td>$5,969,688</td>
<td>20.9%</td>
</tr>
<tr>
<td>FTEs</td>
<td>150.75</td>
<td>147.17</td>
<td>178.76</td>
<td>28.01</td>
<td>18.6%</td>
</tr>
<tr>
<td><strong>Cost per FTE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries</td>
<td>$139,942</td>
<td>$144,309</td>
<td>$145,629</td>
<td>5,688</td>
<td>4.1%</td>
</tr>
<tr>
<td>Payroll Taxes</td>
<td>8,526</td>
<td>7,911</td>
<td>8,880</td>
<td>354</td>
<td>4.2%</td>
</tr>
<tr>
<td>Benefits</td>
<td>21,650</td>
<td>19,572</td>
<td>18,574</td>
<td>(3,076)</td>
<td>-14.2%</td>
</tr>
<tr>
<td>Retirement</td>
<td>19,753</td>
<td>19,632</td>
<td>20,434</td>
<td>680</td>
<td>3.4%</td>
</tr>
<tr>
<td><strong>Total Cost per FTE</strong></td>
<td><strong>$189,871</strong></td>
<td><strong>$191,424</strong></td>
<td><strong>$193,518</strong></td>
<td>$3,646</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

#### Explanation of Significant Variances – 2012 Budget versus 2011 Budget

[to be included in next draft]
## Consultants and Contracts

### Table B-5

<table>
<thead>
<tr>
<th>Consultants and Contracts</th>
<th>Budget 2011</th>
<th>Projection 2011</th>
<th>Budget 2012</th>
<th>Variance 2012 Budget v 2011 Budget</th>
<th>Variance %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability Standards</td>
<td>491,500</td>
<td>504,250</td>
<td>15,000</td>
<td>(476,500)</td>
<td>-97%</td>
</tr>
<tr>
<td>Compliance and Organization Registration and Certification</td>
<td>1,195,000</td>
<td>842,500</td>
<td>480,000</td>
<td>(715,000)</td>
<td>-60%</td>
</tr>
<tr>
<td>Reliability Assessment and Performance Analysis</td>
<td>1,160,000</td>
<td>1,373,000</td>
<td>1,353,000</td>
<td>193,000</td>
<td>17%</td>
</tr>
<tr>
<td>Training and Education</td>
<td>487,658</td>
<td>487,658</td>
<td>836,448</td>
<td>348,790</td>
<td>72%</td>
</tr>
<tr>
<td><strong>Situation Awareness and Infrastructure Security</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Situation Awareness</td>
<td>3,946,558</td>
<td>3,989,607</td>
<td>43,049</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical Infrastructure Protection</td>
<td>635,000</td>
<td>1,050,000</td>
<td>415,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Situation Awareness and Infrastructure Security</strong></td>
<td>4,581,558</td>
<td>5,156,374</td>
<td>5,039,607</td>
<td>458,049</td>
<td>10%</td>
</tr>
<tr>
<td>Committee and Member Forums</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General and Administrative</td>
<td>-</td>
<td>2,250</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal and Regulatory</td>
<td>135,000</td>
<td>135,000</td>
<td>166,750</td>
<td>31,750</td>
<td>24%</td>
</tr>
<tr>
<td>Information Technology</td>
<td>1,033,000</td>
<td>1,033,000</td>
<td>1,618,000</td>
<td>585,000</td>
<td>57%</td>
</tr>
<tr>
<td>Human Resources</td>
<td>250,000</td>
<td>250,000</td>
<td>200,000</td>
<td>(50,000)</td>
<td>-20%</td>
</tr>
<tr>
<td>Accounting and Finance</td>
<td>5,000</td>
<td>5,000</td>
<td>325,000</td>
<td>320,000</td>
<td>6400%</td>
</tr>
<tr>
<td><strong>Consultants Total</strong></td>
<td>$ 9,338,716</td>
<td>$ 9,789,032</td>
<td>$ 10,033,805</td>
<td>$ 695,089</td>
<td>7%</td>
</tr>
</tbody>
</table>

### Explanation of Significant Variances – 2012 Budget versus 2011 Budget

[to be included in next draft]
### Office Rent

#### Table B-6

<table>
<thead>
<tr>
<th>Rent</th>
<th>Budget 2011</th>
<th>Projection 2011</th>
<th>Budget 2012</th>
<th>Variance 2012 Budget v 2011 Budget</th>
<th>Variance %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Rent</td>
<td>$1,020,151</td>
<td>$1,767,416</td>
<td>$2,304,257</td>
<td>$1,284,106</td>
<td>125.87%</td>
</tr>
<tr>
<td>Utilities</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Maintenance</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Office Rent</strong></td>
<td><strong>$1,020,151</strong></td>
<td><strong>$1,767,416</strong></td>
<td><strong>$2,304,257</strong></td>
<td><strong>$1,284,106</strong></td>
<td><strong>125.87%</strong></td>
</tr>
</tbody>
</table>

[variance explanation to be included in next draft]
## Office Costs

### Table B-7

<table>
<thead>
<tr>
<th>Office Costs</th>
<th>Budget 2011</th>
<th>Projection 2011</th>
<th>Budget 2012</th>
<th>Variance 2012 Budget v 2011 Budget</th>
<th>Variance %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone</td>
<td>$272,018</td>
<td>$272,018</td>
<td>$441,280</td>
<td>$169,262</td>
<td>62.22%</td>
</tr>
<tr>
<td>Telephone Answering Srv</td>
<td>2,400</td>
<td>2,400</td>
<td>2,400</td>
<td>-</td>
<td>0.00%</td>
</tr>
<tr>
<td>Internet</td>
<td>514,924</td>
<td>654,924</td>
<td>312,900</td>
<td>(202,024)</td>
<td>-39.23%</td>
</tr>
<tr>
<td>Office Supplies</td>
<td>152,500</td>
<td>152,500</td>
<td>170,600</td>
<td>18,100</td>
<td>11.87%</td>
</tr>
<tr>
<td>Computer Supplies and Maintenance</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Computers</td>
<td>201,200</td>
<td>201,200</td>
<td>37,000</td>
<td>(164,200)</td>
<td>-81.61%</td>
</tr>
<tr>
<td>Computer Supplies</td>
<td>63,700</td>
<td>63,700</td>
<td>91,400</td>
<td>27,700</td>
<td>43.49%</td>
</tr>
<tr>
<td>Maintenance &amp; Service Agreements</td>
<td>589,850</td>
<td>565,441</td>
<td>1,168,400</td>
<td>578,550</td>
<td>98.08%</td>
</tr>
<tr>
<td>Software</td>
<td>167,925</td>
<td>167,925</td>
<td>130,670</td>
<td>(37,255)</td>
<td>-22.19%</td>
</tr>
<tr>
<td>Network Supplies</td>
<td>40,645</td>
<td>40,645</td>
<td>-</td>
<td>(40,645)</td>
<td>-100.00%</td>
</tr>
<tr>
<td>Publications &amp; Subscriptions</td>
<td>71,670</td>
<td>71,670</td>
<td>50,500</td>
<td>(21,170)</td>
<td>-29.54%</td>
</tr>
<tr>
<td>Dues</td>
<td>39,594</td>
<td>39,594</td>
<td>33,250</td>
<td>(6,344)</td>
<td>-16.02%</td>
</tr>
<tr>
<td>Postage</td>
<td>23,500</td>
<td>23,500</td>
<td>24,200</td>
<td>700</td>
<td>2.98%</td>
</tr>
<tr>
<td>Express Shipping</td>
<td>32,250</td>
<td>32,250</td>
<td>49,000</td>
<td>16,750</td>
<td>51.94%</td>
</tr>
<tr>
<td>Copying</td>
<td>72,000</td>
<td>72,000</td>
<td>139,000</td>
<td>67,000</td>
<td>93.06%</td>
</tr>
<tr>
<td>Reports</td>
<td>10,000</td>
<td>10,000</td>
<td>3,219</td>
<td>(6,781)</td>
<td>-67.81%</td>
</tr>
<tr>
<td>Stationary/Forms</td>
<td>2,500</td>
<td>2,500</td>
<td>15,000</td>
<td>12,500</td>
<td>500.00%</td>
</tr>
<tr>
<td>Equipment Repair/Service Contracts</td>
<td>31,000</td>
<td>31,000</td>
<td>25,000</td>
<td>(6,000)</td>
<td>-19.35%</td>
</tr>
<tr>
<td>Bank Charges</td>
<td>5,000</td>
<td>5,000</td>
<td>15,000</td>
<td>10,000</td>
<td>200.00%</td>
</tr>
<tr>
<td>Taxes</td>
<td>60,000</td>
<td>60,000</td>
<td>50,000</td>
<td>(10,000)</td>
<td>-16.67%</td>
</tr>
<tr>
<td>Merchant Card Fees</td>
<td>67,500</td>
<td>67,500</td>
<td>80,000</td>
<td>12,500</td>
<td>18.52%</td>
</tr>
</tbody>
</table>

| Total Office Costs                  | $2,420,176  | $2,535,767      | $2,838,819  | $418,643                          | 17.30%     |

### Explanation of Significant Variances – 2012 Budget versus 2011 Budget

[To be included in next draft]
Professional Services

Table B-8

<table>
<thead>
<tr>
<th>Professional Services</th>
<th>Budget 2011</th>
<th>Projection 2011</th>
<th>Budget 2012</th>
<th>Variance 2012 Budget v 2011 Budget</th>
<th>Variance %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Trustee Fees</td>
<td>$985,000</td>
<td>$985,000</td>
<td>$980,000</td>
<td>$(5,000)</td>
<td>-0.51%</td>
</tr>
<tr>
<td>Trustee Search Fee</td>
<td>120,000</td>
<td>120,000</td>
<td>75,000</td>
<td>(45,000)</td>
<td>-37.50%</td>
</tr>
<tr>
<td>Outside Legal</td>
<td>615,000</td>
<td>773,370</td>
<td>700,000</td>
<td>85,000</td>
<td>13.82%</td>
</tr>
<tr>
<td>Lobbying Fees</td>
<td>50,000</td>
<td>50,000</td>
<td>50,000</td>
<td>-</td>
<td>0.00%</td>
</tr>
<tr>
<td>Accounting &amp; Auditing Fees</td>
<td>100,000</td>
<td>105,000</td>
<td>135,000</td>
<td>35,000</td>
<td>35.00%</td>
</tr>
<tr>
<td>Insurance Commercial</td>
<td>75,000</td>
<td>115,000</td>
<td>115,000</td>
<td>40,000</td>
<td>53.33%</td>
</tr>
<tr>
<td><strong>Total Services</strong></td>
<td>$1,945,000</td>
<td>$2,148,370</td>
<td>$2,055,000</td>
<td>$110,000</td>
<td>5.66%</td>
</tr>
</tbody>
</table>

Explanation of Significant Variances – 2012 Budget versus 2011 Budget

[to be included in next draft]
2013 and 2014 Projections

[discussion of projections and new table to be included in next draft]
Section C — Non-Statutory Activity

NERC has no non-statutory activities.
Section D — Supplemental Financial Statements
Announcement:
NERC Draft 2012 Business Plan and Budget — Posted

On Tuesday, May 3, 2011, at 10:00 a.m. Eastern Time, NERC will conduct a webinar and conference call to provide an overview and summary of the first draft of NERC’s 2012 Business Plan and Budget which has been posted and is now available at the following link:

NERC Draft 2012 Business Plan and Budget

To register for the webinar click here: https://cc.readytalk.com/r/qc29q5dbpn6. Login and dial-in information will be provided in a confirmation email upon completion of registration.

---

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Announcement:
NERC Draft 2012 Business Plan and Budget

On Tuesday, May 3, 2011, NERC will conduct a webinar and conference call to provide an overview and summary of the first draft of NERC’s 2012 Business Plan and Budget. Materials will be posted and announced in advance of the call. It will be recorded and available on NERC’s website after completion for anyone not able to listen in at the scheduled time.

To register for the webinar click here: https://cc.readytalk.com/r/qc29q5dbppn6

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First draft of the Regional Entities 2012 Business Plans and Budgets are now available on NERC’s Website at the following link:


---

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Process:

- Past practice: SC required to “accept all” which led to too many projects started, dragging out schedules, overwhelming stakeholders, staff, FERC
- New standard process and new SC Charter allow prioritization of projects for the first time

SC worked with staff to develop prioritization tool

- Tool posted for comment –positive industry response
- Endorsed by NERC Board of Trustees on Feb. 17
- SC has used the Tool to make prioritization decisions
- SC will continue to refine the Tool for future use
Approach to Prioritization

1. Address or meet all regulatory deadlines
2. Focus on projects closing reliability gaps and significant improvements to existing standards
3. Focus on improving standards quality and clarity
4. Balance consideration of all prioritization criteria
5. Make intelligent choices on the use of NERC and industry resources
### Prioritization Tool

#### STANDARDS COMMITTEE

**Reliability Standard Project Prioritization**

<table>
<thead>
<tr>
<th>Priority Number</th>
<th>Project Number and Name</th>
<th>Short Description</th>
<th>Overall Priority Rating</th>
<th>Meet a time-constrained regulatory directive due in (100 &lt; 12 mo, 75 &lt; 18 mo, 50 &gt; 18 mo)</th>
<th>Address regulatory directives without a time-constraint (Directive index for Project times two, with 0 to 50 range)</th>
<th>Fill an identified gap in reliability 100 = severe risk of “Big Three” 75 = moderate and widespread 50 = moderate risk or scope 25 = small risk 0 = none</th>
<th>Improves existing reliability standards 100 = significantly 75 = moderately 50 = incrementally 25 = minimally 0 = none</th>
<th>Coordinate changes with another project 50 = immediately 40 = in 1 to 2 years 30 = in more than 2 years 25 = in 2 to 3 years 15 = in over 3 years 0 = none needed</th>
<th>Scheduled for its 5 year review in: 50 = 1 year or less 40 = 1 to 2 years 30 = 2 to 3 years 25 = over 3 years 0 = none needed</th>
<th>Address compliance issues (0 to 50)</th>
<th>Address failed interpretation or SDT inability to develop an interpretation 50 = major gap 25 = moderate 10 = admin 0 = none</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Project 2006-06 Cyber Security - Order 706 (1) 419</td>
<td>This is the second phase (Phase 2) of Project 2006-06 Cyber Security Order 706. The project requires modifications to CP-002 thru CP-009 not included in Phase 1 of the project to bring the standards into conformance with the ERC Rules of Procedure and to address the issues from FPCC Order 704.</td>
<td>371</td>
<td>0</td>
<td>50</td>
<td>75</td>
<td>100</td>
<td>0</td>
<td>25</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>Project 2007-17 Protection System Maintenance &amp; Testing (2) 363</td>
<td>Transmission and Generation Protection System Maintenance and Testing, to consolidate PRC-005-1, PRC-006-0 — Underfrequency Load Shedding Equipment Maintenance Programs PRC-011-0 — UVLS System Maintenance and Testing, and PRC-017-0 — Special Protection System Maintenance and Testing into a single maintenance and testing standard. Standards PRC-005-0, PRC-011-0, and PRC-017-0 would then be utilized.</td>
<td>338</td>
<td>0</td>
<td>6</td>
<td>50</td>
<td>100</td>
<td>0</td>
<td>25</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>Project 2007-08 System Protection Coordination (3) 264</td>
<td>Requires upgrading and expanding the existing requirements to identify criteria for determining where to install protection system devices and for requiring the installation of those devices to protect the reliability of the bulk electric system.</td>
<td>289</td>
<td>0</td>
<td>0</td>
<td>50</td>
<td>100</td>
<td>0</td>
<td>25</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>Project 2010-07 Transmission Requirements at the Generator Interface (6) 259</td>
<td>The project proposes changes to the requirements and the addition of new requirements to add significant clarity to Generator Owners and Generator Operators regarding their reliability standard obligations at the interface with the interconnected grid.</td>
<td>275</td>
<td>0</td>
<td>0</td>
<td>75</td>
<td>75</td>
<td>50</td>
<td>25</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Project 2007-12 Frequency Response (7) 238</td>
<td>Requires entities to provide data needed to model each interconnection’s frequency response.</td>
<td>265</td>
<td>75</td>
<td>5</td>
<td>50</td>
<td>100</td>
<td>0</td>
<td>25</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>Project 2007-02 Operating Personnel Communications Protocols (10) 210</td>
<td>Requires developing new requirements in support of blackout recommendation R26 to ensure that realtime system operators use standard communication protocols during normal and emergency operations.</td>
<td>260</td>
<td>0</td>
<td>8</td>
<td>50</td>
<td>75</td>
<td>50</td>
<td>25</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Standards Committee Proposal

- **High Priority Projects**
  - Continue on 12 projects identified as highest priority
  - Continue work on projects scheduled for completion in 1st quarter (even if not in top 12)
  - Respond to new regulatory and policy priorities as they emerge

- **Remaining Ongoing Projects**
  - Continue efforts to develop technical justifications where needed
  - Communicate with team leaders: Informal work may continue without Standards Staff support; otherwise, develop and document logical stopping points and begin placing project on hold

- **Remaining “New” Projects** (where stds. drafting has not begun)
  - No start until higher priority projects are completed
  - Technical Committees will be encouraged to work on refining the technical foundations for the projects
Top Twelve Projects

1. 2008-06 Cyber Security Order 706
2. 2007-17 Protection System Maintenance and Testing
3. 2007-06 System Protection Coordination
4. 2010-07 Generator Requirements at the Transmission Interface
5. 2007-12 Frequency Response
6. 2007-02 Operation Personnel Communications Protocols
Top Twelve Projects

7. 2006-02 Assess Transmission Future Needs
8. 2010-17 Definition of Bulk Electric System
9. 2007-03 Real Time Operations
10. 2007-09 Generator Verification
11. 2009-01 Disturbance and Sabotage Reporting
12. 2010-05 Protection Systems
Informal Development Work: continue development of technical justification/outreach w/o Standards Staff support; develop and document logical stopping point; begin placing projects on hold

13. 2006-06 Reliability Coordination
14. 2010-14 Balancing Authority Reliability Controls
15. 2007-07 Vegetation Management
16. 2007-11 Disturbance Monitoring Equipment
17. 2008-01 Voltage and Reactive Planning and Control
18. 2010-13 Relay Loadability
19. 2009-02 Real-time Reliability Monitoring and Analysis Capabilities
20. 2009-03 Emergency Operations
21. 2008-12 Coordinate Interchange
No start until higher priority projects are completed; Standing Committees encouraged to refine project’s technical foundation

22. 2010-01 Support Personnel Training
23. 2009-04 Phasor Measurement Units
24. 2008-02 Under-voltage Load Shedding
25. 2009-07 Reliability of Protection Systems
26. 2010-08 Functional Model Glossary Revisions
27. 2010-04 Demand Data
28. 2010-03 Modeling Data
29. 2009-05 Resource Adequacy Assessments
30. 2012-02 Physical Protection
31. 2010-02 Connecting New Facilities to the Grid
32. 2012-01 Equipment Monitoring and Diagnostic Devices
Standards Committee Future Work

- Prioritization Tool will be refined and applied to:
  - “New” projects as they are presented to the SC; and
  - NERC’s Three-Year Reliability Standards Development Plan

- SC Expectation: holds on ongoing projects and full stops will not be a recurring pattern

- Resources: NERC staff and industry will need to focus more resources on standards development

- Process Efficiencies: SC continues to look for new ways to make the standards process more efficient while ensuring industry consensus in support of technically excellent standards.
Northeast Power Coordinating Council, Inc.

Approval of the Members

The undersigned, a General Member or Full Member of NPCC on behalf of:

________________________________________

Member Company

votes:

for ______  Amended and Restated Bylaws of
Northeast Power Coordinating
Council, Inc. (NPCC)

against ______

________________________________________  ______

Signature of Member  Date

Due April 12, 2011
Dear Members:

Attached, on behalf of Edward A. Schwerdt, President & CEO of NPCC, are a transmittal letter and associated materials supporting a Members ballot on revisions to the Amended and Restated Bylaws of NPCC. A separate, word version of the ballot is enclosed for your convenience.

An NPCC Membership webinar to review the materials attached has been scheduled for Wednesday, March 23 at 11:00 a.m.

Webinar information is as follows:

NPCC invites you to attend this online meeting.

Topic: NPCC Membership Review of Corporate Governance Changes
Date: Wednesday, March 23, 2011
Time: 11:00 am, Eastern Daylight Time (New York, GMT-04:00)
Meeting Number: 746 197 390
Meeting Password: (This meeting does not require a password.)

To join the online meeting (Now from iPhones too!)

1. Go to https://premconf.webex.com/premconf/j.php?ED=144721977&UID=1154511097&RT=MiMxMQ%3D%3D
2. Enter your name and email address.
3. Enter the meeting password: (This meeting does not require a password.)
4. Click "Join Now".

To view in other time zones or languages, please click the link: https://premconf.webex.com/premconf/j.php?ED=144721977&UID=1154511097&ORT=MiMxMQ%3D%3D

To join the teleconference only

Provide your phone number when you join the meeting to receive a call back. Alternatively, you can call:
Call-in toll-free number (Premiere): 1-877-260-3999
Attendee access code: 6945#

For assistance

1. Go to https://premconf.webex.com/premconf/mc
2. On the left navigation bar, click "Support".

You can contact Ms. Maritza Feliciano of NPCC at: mfeliciano@npcc.org

To add this meeting to your calendar program (for example Microsoft Outlook), click this link: https://premconf.webex.com/premconf/j.php?ED=144721977&UID=1154511097&ICS=MIXLD=1&RD=2&ST=1&SHA2=3Ygh5g-/5HHZnEVbS9xW5IRiXtRxmucJr6sKYPs3Gc=&RT=MiMxMQ%3D%3D

The playback of UCF (Universal Communications Format) rich media files requires appropriate players. To view this type of rich media files in the meeting, please check whether you have the players installed on your computer by going to https://premconf.webex.com/premconf/systemdiagnosis.php

http://www.webex.com

IMPORTANT NOTICE: This WebEx service includes a feature that allows audio and any documents and other materials exchanged or viewed during the session to be recorded. By joining this session, you automatically consent to such recordings. If you do not consent to the recording, do not join the session.

Sincerely,

Maritza Feliciano
Office Manager and Executive Assistant
Northeast Power Coordinating Council, Inc.
☎️ (212) 840-1070 Main
☎️ (212) 840-4903 Direct
☎️ (212) 302-2782
mfeliciano@npcc.org
March 15, 2011

To: NPCC Full and General Member Representatives and Alternates

From: Edward A. Schwerdt, NPCC President and CEO

Subject: Modifications to the NPCC Corporate Governance Model
Electronic Ballot Consideration of Revisions to Amended and Restated Bylaws of NPCC

Ladies and Gentlemen:

Attached for your use is a ballot regarding revisions to Amended and Restated Bylaws of NPCC (Bylaws) to be completed by each of the NPCC Full and General Members and returned no later than April 12, 2011 to Ms. Maritza Feliciano via email at mfeliciano@npcc.org. NPCC’s Chairman of the Board, Mr. Harvey J. Reed, at the December 1st, 2010 Annual Meeting of the Members held in Albany, New York, presented a review of the past year’s efforts in terms of examining alternative corporate governance structures for NPCC. Those efforts accomplished through the Corporate Governance and Nominating Committee (CGNC) of the Board of Directors have culminated in recommendations to revise the existing NPCC stakeholder corporate governance model, contained in the current Bylaws effective July 24, 2007.

Revisions reflect an enhanced governing body that facilitates NPCC’s achievement of its international reliability mission and provides the necessary support for NPCC to reach its strategic goals effectively and efficiently, incorporating Regional Entity evolution over recent years. All recommended changes to the Bylaws were unanimously endorsed at this morning’s meeting of the NPCC Board of Directors for subsequent approval by NPCC Full and General Members.

Also attached for your information are copies of blackline and clean versions of the Bylaws, a detailed matrix highlighting the revisions, and a PowerPoint presentation that will be presented to the Membership via webinar from 11 a.m. to noon on Wednesday, March 23rd, 2011 by NPCC’s Secretary, Ms. Andrianne Payson. Information regarding the webinar is included in the body of the email transmitting these materials.

In summary, enhancements to the NPCC governance structure address trimming the relatively large size of the current Board structure, combining a sparsely populated stakeholder sector into another existing sector, introducing independent, outside perspectives from independent directors to be retained at the Board level creating a hybrid board structure, and establishing a mechanism for populating the hearing body to meet the requirement for impartial resolution of any contested compliance matters.
### Summary of Hybrid Board Structure

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<td>Sector (7)</td>
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<tr>
<td>Sector (8)</td>
<td>Independent (2 Directors)</td>
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These *Amended and Restated Bylaws* are recommended for your approval. Please sign and return the attached ballot by 12:00 noon on April 12, 2011 indicating your approval of the *Amended and Restated Bylaws of NPCC*. 
Northeast Power Coordinating Council, Inc.

Approval of the Members

The undersigned, a General Member or Full Member of NPCC on behalf of:

__________________________________________________

Member Company

votes:

for ______ Amended and Restated Bylaws of Northeast Power Coordinating Council, Inc. (NPCC)

against ______

__________________________________________________  
Signature of Member  

Date

Due April 12, 2011
AMENDED AND RESTATED BYLAWS
OF
NORTHEAST POWER COORDINATING COUNCIL, INC.
(a New York not-for-profit corporation)

Adopted on May 18, 2006

Amended on July 24, 2007

and [__________], 2011
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SCHEDULES

Schedule A – List of NPCC Members
Schedule B – Rules of Procedure (Selection of NPCC Directors)
I. **Offices**

**ARTICLE I - DEFINITIONS**

1.1 **Definitions.** As used herein, the following terms have the respective meanings set forth below:

“*Affiliate*” means, with respect to any entity, any other entity that, directly or indirectly, through one or more intermediaries, controls, or is controlled by, or is under common control with, such entity, as determined in the sole discretion of the Board. For this purpose, “control” may be presumed by the direct or indirect ownership of ten percent (10%) or more of the outstanding voting capital stock or other equity interests having ordinary voting power. Notwithstanding the foregoing, “Affiliate” excludes any entity wholly-owned or controlled by a Canadian Provincial government.

“*Board*” means the Board of Directors of NPCC.

“*Board Chair*” means the independent non-executive chairman of the Board who is retained by NPCC pursuant to a separate Board-approved agreement.

“*Bulk Power System*” shall have the meaning in the United States set forth in Section 215 of the Federal Power Act, as amended (16 U.S.C. § 824 et seq.), and such meaning in Canada as is consistent with applicable Provincial regulatory and/or governmental authority determinations.

“*Bylaws*” means these Amended and Restated Bylaws of NPCC, as approved by the Members of NPCC on [______], 2011 and effective as of [______], 2011.

“*Certificate of Incorporation*” means the Certificate of Incorporation of NPCC filed with the Secretary of State of the State of New York, as may be amended from time to time.

“*FERC*” means the Federal Energy Regulatory Commission.

“*Hearing Body*” means a group comprising the Hearing Officer and two (2) Independent Directors (excluding the Board Chair) which has been authorized by NPCC to conduct and render decisions in a formal compliance hearing of any entity registered in the NERC compliance registry who is the subject of a notice of alleged violation, proposed penalty or sanction, contested mitigation plan or contested remedial action directive.
“Hearing Officer” means an individual employed or contracted by NPCC and designated by NPCC to preside over formal compliance hearings.

“Independent Director” means a director who satisfies the “independence” criteria in Section 6.7(b) and serves in Sector 8 (Independent Directors) of the Board.

“NERC” means the North American Electric Reliability Corporation, or any successor entity, which has been certified by FERC as the ERO pursuant to Section 215 of the Federal Power Act, as amended (16 U.S.C. § 824 et seq.).

“Northeastern North America” means the geographical area within the perimeter border enclosing the State of New York, the six New England States of the United States, and the Canadian Provinces of Ontario, Québec, New Brunswick and Nova Scotia, including any radial load or generation connecting to these systems.

“NPCC” means Northeast Power Coordinating Council, Inc., or any successor entity.

“Stakeholder Director” means a director who serves in one of the seven (7) stakeholder sectors of the Board described in Section 4.4.

1.2 Additional Defined Terms. Terms not defined in these Bylaws shall have the definitions set forth in the Federal Power Act, Part 39 of the regulations of the FERC, as further clarified in FERC’s April 19, 2007 Order 119 FERC ¶ 61,060, and if not defined in any of those sources, shall be defined in accordance with their commonly understood and used technical meanings in the electric power industry, including applicable codes and standards.

ARTICLE II - OFFICES

2.1 Principal Office. The principal office of Northeast Power Coordinating Council, Inc. (“NPCC”) shall be located in New York County, State of New York.

ARTICLE III - PURPOSE

3.1 Not-for-Profit Corporation. NPCC is operated as a New York not-for-profit corporation and is organized pursuant to the Not-for-Profit Corporation Law of the State of New York (“N-PCL”).

3.2 Purpose of Northeast Power Coordinating Council, Inc. The purpose of NPCC is to promote and enhance the reliable and efficient operation of the international, interconnected bulk power system in Northeastern North America through (i) the development of regional reliability standards and compliance assessment and enforcement of continent-wide and regional reliability standards, (ii) coordination of system planning, design and operations, and assessment of reliability, pursuant to an agreement with the Electric Reliability Organization (“ERO”) which designates NPCC as a regional entity and delegates authority from the U.S. Federal Energy Regulatory Commission (“FERC”)

[4]
by Memoranda of Understanding with applicable Canadian Provincial regulatory and/or governmental authorities (collectively, "statutory Regional Entity activities"), and (ii) the establishment of regionally-specific reliability criteria, and the monitoring and enforcement of compliance with such criteria (collectively, "non-statutory criteria services Criteria Services activities"). In the development of regionally-specific reliability criteria, NPCC, to the extent possible, facilitates the attainment of fair, effective and efficient competitive electric markets.

III. Terms

Terms not defined in these Bylaws shall have the definitions set forth in the Federal Power Act, Part 39 of the regulations of the FERC, as further clarified in FERC's April 19, 2007 Order 119 FERC 61,060, and if not defined in any of those sources, shall be defined in accordance with their commonly understood and used technical meanings in the electric power industry, including applicable codes and standards.

“Bulk Power System” shall be deemed to refer to the interconnected electrical systems within Northeastern North America comprising generation and transmission facilities on which faults or disturbances can have a significant adverse impact outside of the local area. In this context, local areas and the specific facilities that comprise the bulk power system are determined by the Members of NPCC, utilizing a reliability impact based methodology.

“Northeastern North America” shall be deemed to comprise the geographical area within the perimeter border enclosing the State of New York, the six New England States of the United States, and the Canadian Provinces of Ontario, Quebec, New Brunswick and Nova Scotia, including any radial load or generation connecting to these systems.

IV. Membership

ARTICLE IV - MEMBERSHIP

4.1 A. List of Members. The Members of NPCC are listed on Schedule A attached hereto.

4.2 B. Eligibility. Upon suitable application describing the nature and activities of the applicant, additional entities shall be accepted by the Board of Directors of NPCC (the "Board") as Members in the appropriate categories, defined as follows:

(1) General Membership is voluntary and is open to any person or entity, including any entity participating in the Registered Ballot Body of the ERO that has an interest in the reliable operation of the Northeastern North American bulk power system Bulk Power System. General Members that are also registered entities within the NPCC Region are subject to compliance with reliability standards and, consistent with their registration, and are also entitled to receive additional services from the regional entity Regional Entity division of NPCC.
(2) — **Full Membership** shall be available to entities which are General Members that also participate in electricity markets in the international, interconnected bulk power system in Northeastern North America. Independent system operators (“ISOs”), regional transmission organizations (“RTOs”), Transcos and other organizations or entities that perform the Balancing Authority function operating in Northeastern North America are expected to be Full Members of NPCC. The New York State Reliability Council and any other sub-regional reliability councils which may be formed are also expected to be Full Members. Full Members are subject to compliance with regionally-specific criteria, in addition to more stringent reliability criteria for their generation and transmission facilities on which faults or disturbances can have a significant adverse impact outside of the local area and which are identified utilizing a reliability impact-based methodology. Full Members are also subject to compliance with reliability standards, and are entitled to receive additional services from the Criteria Services division of NPCC.

### 4.3 Application as a Member.

(a) **Application as a Member.** Any person or entity that is eligible to become a Member of NPCC in accordance with Article IV, Section 4.2 may become either a General Member or a Full Member by completing and submitting to NPCC a membership application on a form prescribed by the Board. Any person or entity that applies to NPCC as a Member shall comply with the conditions and obligations of membership specified in these Bylaws. As an additional condition of membership in NPCC, each person or entity registering as a Member shall execute an agreement with NPCC, in a form to be specified by the Board, that such person or entity will hold harmless all Directors, officers, employees and agents of NPCC, as well as volunteers participating in good faith in the activities of NPCC, to the extent permitted by U.S. Federal or Canadian Provincial laws, rules and regulations, for any injury or damage caused by any act or omission of any Director, officer, employee, agent or volunteer in the course of performance of his or her duties on behalf of NPCC, other than for acts of gross negligence, intentional misconduct or a breach of confidentiality.

(b) If not a natural person, the Member shall designate a representative and an alternate representative with authority to receive notices, cast votes, execute waivers and consents, and enter into binding agreements on behalf of the Member. NPCC shall maintain a current roster of the Members of NPCC, including each Member’s designated representative and alternate representative. From time to time, the Board may establish a date by which Members shall submit their application renewals. All Members shall confirm their applications within thirty (30) calendar days of the date of receipt of request by NPCC, using an application renewal form prescribed by the Board. Any Member that has not submitted an application renewal within thirty (30) calendar days following the date established by the Board shall be removed from the NPCC roster. NPCC shall notify any Member that is removed from the roster of Members of such removal, by written notice sent to such former Member’s last known address on the records of NPCC.
4.4 Voting. There shall be eight (8) Members are eligible to vote in one of the seven (7) stakeholder voting sectors (“Voting Sectors”), defined as follows described below:

**Sector (1). Sector (1).** Transmission Owners: This Voting Sector shall consist of any entity within Northeastern North America that owns at least 200 circuit miles of integrated transmission facilities, or has an Open Access Transmission Tariff or equivalent on file with the FERC or the appropriate regulatory or governmental authority. This sector includes transmission owners that have placed their transmission under the operational control of an ISO/RTO, independent transmission companies and merchant transmission owners/developers.

**Sector (2). Sector (2).** Reliability Coordinators: This Voting Sector shall consist of any entity within Northeastern North America certified as a Reliability Coordinator.

**Sector (3). Sector (3).** Transmission Dependent Utilities (“TDUs”); Distribution Companies and Load-Serving Entities (“LSEs”). This Voting Sector shall consist of entities within Northeastern North America that are:

- (a) Entities with a regulatory contract, or other legal obligation to serve wholesale aggregators or end-use customers, and that depend primarily on the transmission systems of third parties to provide this service;

- (b) Agents or associates that represent groups of TDUs;

- (c) Electric distribution companies;

- (d) Entities serving end-use customers under a regulated tariff, a contract governed by a regulatory tariff, or other legal obligation to serve; or

- (e) Each member of a generation and transmission (“G&T”) cooperative or a joint-action agency permitted to designate the G&T or joint action agency to represent such entities in this sector.

**Sector (4). Sector (4).** Generator Owners: This Voting Sector shall consist of entities within Northeastern North America that are affiliated and/or independent generators.

**Sector (5). Sector (5).** Marketers, Brokers and Aggregators: This Voting Sector shall consist of entities within Northeastern North America that are:
(a) Entities providing energy to end-use customers under a power marketing agreement or other authorization not classified as a regulated tariff;

(b) Entities that buy, sell, or broker energy and related services for resale in wholesale or retail markets, whether a non-jurisdictional entity operating within its charter or an entity licensed by a jurisdictional regulator; or

(c) Generation and transmission cooperatives and joint-action agencies that perform an electricity broker, aggregator, or marketer function.

Sector (6). Customers: This Voting Sector shall consist of entities within Northeastern North America that are:

(a) Entities or customers that take delivery of energy that is not purchased for resale within Northeastern North America;

(b) Agents or associations representing groups of large end users within Northeastern North America; or

(c) Agents, state consumer advocates, or other advocate groups representing groups of small customers within Northeastern North America.

Sector (6), Sector (7). State and Provincial Regulatory and/or Governmental Authorities. This Voting Sector shall consist of State and Provincial regulatory or governmental authorities within Northeastern North America.

Sector (7), Sector (8). Sub-Regional Reliability Councils, Other Customers, Other Regional Entities and Interested Entities: This Voting Sector shall consist of:

(a) Any entity within Northeastern North America authorized by an appropriate regulatory and/or governmental authority to be a Sub-Regional Reliability Council;

(b) Entities or customers that take delivery of energy that is not purchased for resale within Northeastern North America;

(c) Agents or associations representing groups of large end users within Northeastern North America;

(d) Agents, state consumer advocates, or other advocate groups representing groups of small customers within Northeastern North America;
(e) Any other delegated Regional Entity; or

(f) Any person or entity, including any entity participating in the Registered Ballot Body of the ERO, that has an interest in the reliable operation of the bulk power system in Northeastern North America.

4.5 **E.** Assignment to Voting Sector. A new applicant for membership shall request to be assigned to a Voting Sector 

stakeholder voting sector, subject to Board approval. A Member may request to be assigned to any Voting Sector stakeholder voting sector so long as membership in that Voting Sector stakeholder voting sector is consistent with the Member’s business or other activities within the NPCC region. Multiple memberships of the separate business functions of an entity are permitted, with each membership business function assigned to the appropriate separate sector and each membership designating a different. Each such business function may designate its own representative and alternate, however, no representative and alternate can represent more than one business function of an entity in a stakeholder voting sector. A consultant, attorney, agent, vendor, trade or industry association, state, provincial or local consumer advocate organization that provides services to or otherwise represents the interests of the Members of one or more Voting Sector stakeholder voting sectors may elect to be assigned to one such Voting Sector stakeholder voting sector subject to Board approval. Entities may elect to change their Voting Sector participation in connection with the stakeholder voting sector designation during an Annual Meeting of Members of NPCC, subject to Board approval.

4.6 **F.** Term of Membership. Membership in NPCC shall be retained so long as a Member meets its respective qualifications, obligations, and conditions of membership as set forth in this Article IV.

**ARTICLE V - V. Organization of NPCC**

5.1 **A.** Member Representatives. Each Member shall designate a senior executive level representative and an alternate representative with full authority to act on its behalf in carrying out the work of NPCC.

B. NPCC shall have a Board of Directors and shall retain a Chairman, who shall serve as Chair of the Board. The Board shall also consist of two Co-Vice Chairs, the President and the Secretary, all ex officio, and additional Directors to be selected by the eight Voting Sectors of Members as specified below. The Directors shall designate two Co-Vice Chairs. The Co-Vice Chair designees shall be from different Voting Sectors and shall be elected by a vote of the entire Membership. In the temporary absence of the Chair, a Vice Chair designated by two-thirds vote of the Directors shall perform the duties of the Chair. NPCC’s Chairman, President and officers, when serving ex officio, shall not have any vote on Board matters, except that the Co-Vice Chairs shall retain the voting rights that they otherwise hold by virtue of serving as a Director.
5.2 **Board of Directors.** The business and affairs of NPCC shall be managed under the direction of the Board.

5.3 **C. Officers.** The officers of NPCC shall consist of a President and Chief Executive Officer (CEO), a Secretary and a Treasurer, with assistants as appropriate, and such additional officers as may be approved by the Members. Officers, except for the President and CEO, shall hold office for one (1) year or until the next Annual Meeting of Members of NPCC and until their successors are duly elected and qualified.

5.4 **D. President and CEO.** NPCC shall employ a President and CEO and staff, as required, to carry out NPCC’s mission and to perform the functions of NPCC. The President and CEO shall be appointed by the Board and shall serve at the Board’s discretion. In the event of a vacancy in the presidency, the Board shall appoint an interim President and CEO who shall serve until such time as the Board appoints a new President, and CEO. The authority and responsibilities of the President and CEO shall be defined by the Board.

5.5 **Vacancies.**

   **(a) E.** In the event a vacancy occurs in the Board of Directors, or in the office of Co-Vice Chair, Secretary, or Treasurer in the interim between Annual Meetings of Members of NPCC, the Board Chair may designate (i) a person from the same **Voting Sector stakeholder voting sector** to fill such vacancy with the approval of a majority vote of Members from the applicable Sector, or (ii) in the case of a vacancy in the office of the Secretary or Treasurer, from outside of NPCC to fill such vacancy with the approval of a majority vote of the Directors.

   **(b) F.** In the event a vacancy occurs in the office of Board Chair in the interim between Annual Meetings of Members of NPCC, the Board may fill such vacancy by a two-thirds (2/3) affirmative majority of the weighted sector votes, with each Director casting one (1) vote within the applicable sector, at a meeting of the Board at which a quorum is present. The term of office of the persons designated to fill any such vacancy shall expire on the date of the next subsequent Annual Meeting of Members of NPCC. The authority and responsibilities of the Board Chair and the President shall be defined by the Board, and set forth in a separate agreement approved by the Board.

G. **Statutory activities will be conducted by the regional entity division of NPCC.** Non-statutory criteria services will be provided by the criteria services division of NPCC.
VI. Board of Directors

A. Hybrid Board. NPCC shall have a Board of Directors consisting of stakeholders balanced by sector and an independent Chairman, two Co-Vice Chairs, the President, and the Secretary.

5.6 NPCC Activities. NPCC engages in (i) Regional Entity activities which are conducted by its Regional Entity division, and (ii) Criteria Services activities which are conducted by its Criteria Services division.

ARTICLE VI - BOARD OF DIRECTORS

6.1 Hybrid Board.

(a) The Board shall consist of fourteen (14) Stakeholder Directors, two (2) Independent Directors, an independent Board Chair and the President and CEO.

(b) While serving on the Board, the President and CEO shall not be entitled to vote on any Board matters.

(c) Two (2) Co-Vice Chairs from different voting sectors on the Board shall be selected by the Directors and approved by a vote of the entire membership. In the temporary absence of the Board Chair, a Vice Chair designated by a two-thirds (2/3) vote of the Directors shall perform the duties of the Board Chair. The Co-Vice Chairs shall retain the voting rights that they otherwise held by virtue of serving as a Director.

6.2 Term and Compensation.

(a) The term of office of the Directors, each Stakeholder Director shall be three (3) years. Initial terms of Stakeholder Directors shall be staggered by the Board so that these Board members serve initial terms of one, two, or three years. There shall be no limit on the number of terms which may be served by any individual. Stakeholder Director. Stakeholder Directors shall serve without compensation, including when performing duties of a Co-Vice Chair.

(b) The term of office of each Independent Director shall be two (2) years. Independent Directors may serve up to three (3) terms for a maximum of six (6) years. Each Independent Director shall be entitled to receive compensation as the Board may from time to time determine in its sole discretion.

(c) The term of office of the Board Chair shall be two (2) years, with no limitations on the number of terms that may be served. Compensation arrangements of the Board Chair shall be contained in a separate written agreement approved by the Board.

6.3 Powers and Duties.

(a) The Board shall develop NPCC policies, direct the activities of NPCC, accept additional entities as Members, review and approve or
modify Member Voting Sector assignment, and make assignments to the committees of NPCC. The Board shall (i) approve a Regional Delegation Agreement and any amendments thereto, with the ERO which delegates authority from FERC in the United States and any additional agreements with appropriate Canadian Provincial regulatory and/or governmental authorities, (ii) approve and oversee NPCC’s Regional Reliability Standards Development Process and submit such Regional Standards to the ERO for adoption by FERC and appropriate Canadian Provincial regulatory and/or governmental authorities, (iii) approve the NPCC Compliance Monitoring and Enforcement Program and oversee the assessment and enforcement of mandatory compliance with Reliability Standards consistent with the Regional Delegation Agreement and agreements with Canadian Provincial regulatory and/or governmental authorities, and (iv) oversee NPCC’s assessment and enforcement of mandatory compliance with regionally-specific more stringent reliability criteria through administration of the NPCC Reliability Compliance and Enforcement Program. The duties of the Board shall also include consideration and resolution of budgetary matters, including the levying of any special assessments; and the determination of any annual membership fee for Full Members. However, notwithstanding the foregoing, the Board may not amend these Bylaws or establish, modify or eliminate any of NPCC’s Regional Reliability Standards, or regionally-specific more stringent reliability criteria, guides, programs or procedures; nor may the Board add, modify, or eliminate Voting Sectors established pursuant to these Bylaws.

(b) To carry out the purposes of NPCC, the Board, acting through the President and CEO and NPCC staff, shall enlist such personnel from Members as may be necessary; and, within the limits of the annual budget, may employ such personnel, incur such administrative expenses, and retain such independent professional consulting services for NPCC and the committees of NPCC as it may deem desirable.

6.4 D.——Board Composition. NPCC shall have a Board of Directors that shall consist of an independent Board Chair, the President and CEO, such officers as shall from time to time be determined by the Board, and Directors in eight (8) voting sectors. The voting sectors shall include the following comprising seven (7) stakeholder sectors and one (1) independent sector, as described below:

Sector (1), Sector (1).——Transmission Owners (Maximum of 3-2, with no more than 1 per Balancing Authority Area)

Sector (2), Sector (2).——Reliability Coordinators (Maximum of 3)

Sector (3), Sector (3).——Transmission Dependent Utilities (“TDUs”); Distribution Companies and Load-Serving Entities (“LSEs”) (Maximum of 3)

Sector (4), Sector (4).——Generator Owners (Maximum of 3)

Sector (5), Sector (5).——Marketers, Brokers and Aggregators (Maximum of 3)

Sector (6).——Customers (Maximum of 3)

Sector (6), Sector (7).——Regulators (Maximum of 3)
Sector (7). Sector (8).—Sub-Regional Reliability Councils, other Customers, Other Regional Entities and Interested Entities (Maximum of 3, with a representative of the New York State Reliability Council, LLC included)

Sector (8). Independent Directors (Maximum of 2)

6.5 Quorum and Voting Requirements for the Board.

(a) E. Quorum and Voting Requirements for the Board. At any meeting of the Board, attendance in person or by proxy by at least one-half (1/2) of the Stakeholder Directors in each of at least sixty percent (60%) of the stakeholders sectors and at least one (1) Independent Director shall constitute a quorum. Except as otherwise expressly provided in NPCC’s Certificate of Incorporation, these Bylaws or applicable law, actions by the Board shall be approved upon receipt of a two-thirds (2/3) affirmative majority of the weighted sector votes, with each Director casting one (1) vote within the applicable sector, at a meeting of the Board at which a quorum is present. The Board Chair shall also be entitled to cast one (1) vote during any meeting of the Board at which a quorum is present to prevent any deadlock. The following process shall be used to determine if there are sufficient affirmative votes:

- The number of votes cast is the sum of affirmative and negative votes, excluding abstentions.

- The number of affirmative votes cast in each Voting Sector voting sector will be divided by the sum of affirmative and negative votes cast in that Voting Sector voting sector to determine the fractional affirmative vote for each Voting Sector voting sector. Abstentions will not be counted for the purposes of determining the fractional affirmative vote for a Voting Sector voting sector.

- The sum of the fractional affirmative votes from all sectors divided by the number of sectors voting will be used to determine if a two-thirds (2/3) affirmative majority has been achieved. A sector will be considered as “voting” if any Member Director of the sector casts either an affirmative or a negative vote.

(b) An action of the Board will be approved if the sum of fractional affirmative votes from all sectors divided by the number of voting sectors is at least two-thirds (2/3).

6.6 F. Board Action Without Meeting. Any action required, or permitted to be taken at a meeting of the Board of Directors, may be taken without a meeting if the action is taken by all members of the Board. The action must be evidenced by one or more written consents (which may be in electronic form) describing the action taken, signed by each Director, and included in the minute book of NPCC. Any action taken under this Section VI.F. is 6.6 shall be deemed effective when the last Director signs the consent, unless the consent specifies a different effective date.
6.7 Election and Removal of Directors.

(a) **Election and Removal of Directors.** The Initial Board shall be the persons named in the Certificate of Incorporation and shall serve until the first Annual Meeting of the Members. The Initial Board shall nominate a list of **Stakeholder Directors** consistent with the Board composition requirements set forth in Section VI.D of Bylaws at such time. At the first meeting of the Members, the Members from each sector shall vote to elect the **Stakeholder Directors** in their respective sector. **A Director Stakeholder Directors** shall be elected by a vote of the majority of the Members in the respective **stakeholder sector.** No **stakeholder** sector shall elect more than **two Stakeholder Directors** than the number of Members in such sector. **No Member or any Affiliate of a Member may designate more than one (1) Stakeholder Director to represent such Member or Affiliate. Stakeholder Director candidates will be selected in accordance with the Rules of Procedure set forth in Schedule B.**

(b) **Individual Members may nominate an Independent Director candidate by petition.** Each petition shall present only one Independent Director candidate who has met requirements in the Rules of Procedure set forth in Schedule B. Petitions shall be received by the Corporate Governance and Nominating Committee on a date set by the committee. The names on the petition shall reflect at least ten percent (10%) of the Members of NPCC as of January 1 of the year in which the election is to be held. Upon receipt of a valid petition, the Corporate Governance and Nominating Committee shall add the petitioned candidate's name to the slate of director nominees to be presented to the Members for approval at the Annual Meeting of Members.

(c) **Independent Directors shall be nominated in accordance with the Rules of Procedure set forth in Schedule B and recommended by the Board to the Members for consideration and approval.** In order to contribute to the effective functioning of the Board and NPCC, Independent Directors will be drawn from diverse backgrounds and will possess a broad range of industry expertise, perspectives, experiences, skill sets and knowledge. An individual is eligible to serve as an Independent Director if such individual (i) is not an officer or employee of NPCC, (ii) is not an officer, director or employee of a Member, (iii) is not an officer, director or employee of any entity that would reasonably be perceived as having a direct financial interest in the outcome of Board decisions, and (iv) does not have a relationship that would interfere with the exercise of independent judgment in performing the responsibilities of a director. **Independent Directors shall be elected by an affirmative vote of the majority of the Members present at a meeting where a quorum exists.**

(d) **A Stakeholder Director may be removed for cause by at least two-thirds (2/3) of the Members in their respective sector at a regular meeting of the Members or at a special meeting called for that purpose; provided that there is a quorum of that sector’s Members present at that meeting, or by at least a majority of the Directors present at a meeting called for that purpose; and provided, further, that there is a quorum of not less than a majority present at the meeting of Directors at which such action is taken recommended.**

(e) **An Independent Director may be removed for cause by the affirmative vote of at least two-thirds (2/3) of the Directors present at a meeting called for...**
that purpose; provided that there is a quorum of not less than ten (10) Directors present at
the meeting of Directors at which such action is taken.

(f) For purposes of Section 6.7(d) and (e), grounds for removal “for
cause” include, but are not limited to, failure to adequately perform Board duties and
committee responsibilities, a felony conviction, misappropriation of funds, mental
incapacity, and misconduct. In accordance with the N-PCL, an action to procure a
judgment removing any Director for cause may also be brought by the Attorney-General of
the State of New York.

6.8 Indemnification. Subject to the limitation set forth in Section VI.H.6.9 below,
NPCC shall indemnify its Directors, Officers, employees and other corporate agents,
including volunteers participating in good faith in the activities of NPCC and persons serving on
duly constituted committees of NPCC (collectively, “NPCC Indemnitees”), in each case, to the
full extent from time to time permitted by New York Not for Profit Corporation Law (“the
N-PCL”) and other applicable law. Such right of indemnification shall inure to the benefit of the
legal representative of any NPCC Indemnitee. The foregoing right of indemnification shall be in
addition to, and not in restriction or limitation of, any right such NPCC Indemnitee may have
under applicable law (including the N-PCL).

6.9 Limitation on Indemnification. The maximum amount of losses (i.e., damages,
judgments, fines, penalties, liability, costs and expenses, including reasonable attorneys’ fees and
expenses) for which NPCC will be obligated to indemnify the NPCC Indemnitees under Section
VI.H.6.8 will be the policy limit of directors and officers’ (“D&O”) liability insurance set forth
in the D&O insurance policy maintained by NPCC.

ARTICLE VII - COMMITTEES AND HEARING BODY

7.1 Number of Committees. NPCC shall have such committees,
subcommittees, task forces and other groups as the Board may deem appropriate, including a
Regional Standards Committee (RSC), a Compliance Committee (CC), a Reliability
Coordinating Committee (RCC), NPCC’s principal technical committee, a Public Information
Committee (PIC) and an Audit and Finance and Audit Committee, (FAC).

7.2 The Finance and Audit Committee. The Finance and Audit Committee shall
be comprised of at least three (3) members of the Board and shall include one (1) Director which
shall be designated an audit committee financial expert by the Board. A
chairperson of the Audit and Finance and Audit Committee shall be designated by the Board
from among the members of the committee.

7.3 Committee Structure. Committee members shall be nominated and approved by
the Board in accordance with guidelines established by the Board. Quorum and voting rules
applicable to the Board shall also apply to voting on any such NPCC decision making
committees, unless otherwise determined by the Board. Each committee shall establish a charter
or scope of work, which shall be presented to the Board for approval.

VIII. Members’ Voting Rights
7.4 Hearing Body. The Hearing Body shall conduct all compliance proceedings in accordance with the hearing procedures set forth in the NERC Hearing Procedure.

ARTICLE VIII - MEMBERS’ VOTING RIGHTS

8.1 Quorum and Voting Requirements for Meetings of Members.

(a) Quorum and Voting Requirements for Meetings of Members. At any meeting of the Members of NPCC, attendance in person or by proxy by one-half (1/2) of the Members in each of at least sixty percent (60%) of the Voting Sectors on the roster of Members maintained by NPCC shall constitute a quorum. Except as otherwise expressly provided in NPCC’s Certificate of Incorporation, these Bylaws or applicable law, actions by the Members of NPCC shall be approved upon receipt of a two-thirds (2/3) affirmative majority vote of the sectors at a meeting of the Members of NPCC at which a quorum is present, where (i) each Member shall have one (1) vote within a sector, except that if less than one-half (1/2) of the Members in a sector are present, in person or by proxy, at the meeting, the vote of that sector shall be weighted by a percentage equal to the number of Members of the sector present in person or by proxy at the meeting divided by one-half (1/2) of the Members in the sector; (ii) the vote of each sector of NPCC shall be allocated for and against the proposed action based on the respective percentages of votes cast for and against the proposed action by the Members in that sector voting in person or by proxy; and (iii) the proportions of the votes of each sector allocated for and against the proposed action shall be summed to determine the total number of votes for and against the proposed action.

(b) The following process shall be used to determine if there are sufficient affirmative votes:

• The number of votes cast is the sum of affirmative and negative votes, excluding abstentions.

• The number of affirmative votes cast in each sector will be divided by the sum of affirmative and negative votes cast to determine the fractional affirmative vote for each sector. Abstentions will not be counted for the purposes of determining the fractional affirmative vote for a sector.

• The sum of the fractional affirmative votes from all sectors divided by the number of sectors voting will be used to determine if a two-thirds (2/3) affirmative majority has been achieved. (A sector will be considered as “voting” if any Member of the sector casts either an affirmative or a negative vote.)

8.2 Waivers of Notice of Meetings of Members; Member Meeting Adjournments. Notice of a Meeting of Members need not be given to any Member who signs a waiver of notice, in person or by proxy, whether before or after the meeting. The attendance of any Member at a meeting, in person or by proxy, without protesting prior to the conclusion of the meeting the lack of notice of such meeting, shall constitute a waiver of notice of the meeting by
8.3 C——Actions Without a Meeting of Members. Any action, required or permitted to be taken at a Meeting of Members, may be taken without a meeting if the action is consented to in writing by the minimum number of Members that would be required to approve the action at a Meeting of Members at which all Members were present. The call for action without a Meeting of Members may be initiated by the Chairman of the Board or by a number of Members constituting at least ten percent (10%) of the Members on the roster of Members maintained by NPCC, which number shall include Members in at least four (4) of the Voting Sectors. Notice of the proposal for action without a meeting shall be provided to all Members on the roster of Members maintained by NPCC at least seven (7) days prior to the date established for the tabulation of consents. The Members shall receive written notice of the results within fourteen (14) days of the action vote, and all written responses of the Members shall be filed with the minutes of proceedings of Members.

8.4 D——Meeting of Members to be Open. Notice to the public of the dates, places, and times of Meetings of Members, and all non-confidential material provided to the Members, shall be posted on NPCC’s web site at approximately the same time that notice is given to the Members. Meetings of Members shall be open to the public, subject to reasonable limitations due to the availability and size of meeting facilities; provided that the meeting may be held in or adjourn to closed session to discuss matters of a confidential nature, including, but not limited to, personnel matters, compliance and enforcement matters, litigation, or commercially sensitive or critical energy infrastructure information of any entity.

8.5 E——Electronic Voting. Upon completion of applicable processes that permit parties to comment on the subject issue(s), electronic voting on matters before the membership, Board or any committee is permitted. A quorum will be determined to exist for purposes of conducting an electronic vote when NPCC receives completed ballots from two-thirds (2/3) of the total number of outstanding ballots. In the event that a quorum exists for purposes of an electronic vote but the matter has not been resolved, NPCC may continue to solicit additional responses in order to resolve the matter by electronic voting. In the event that quorum has not been achieved for purposes of an electronic vote, NPCC may continue to solicit electronic ballots, including abstentions, to obtain quorum and resolve the matter.

ARTICLE IX - MEMBERS’ RIGHTS AND OBLIGATIONS, AND ORGANIZATIONAL PROCESS

9.1 IX—Membership. All General and Full Members shall have the following rights and obligations:

(1) —Rights:
(a)——Attendance at all meetings of the general membership of NPCC; and, subject to procedures established by the committees and to the terms of applicable confidentiality agreements, attendance at meetings of NPCC’s committees, task forces and any other such NPCC groups.

(b)——Access to minutes of each committee, subcommittee, task force or any other NPCC group, subject to procedures established by the committees and to the terms of applicable confidentiality agreements.

(c)——Vote to amend these Bylaws, in accordance with Section 19.1.

(d)——Vote to establish, modify or eliminate NPCC Regional Reliability Standards and programs.

(e)——For Full Members only: Vote to establish, modify or eliminate NPCC's regionally-specific more stringent reliability criteria.

(2)——Obligations:

(a)——Each Member shall agree, in writing, to accept the responsibility to promote, support, and comply with the purposes and policies of NPCC as set forth in its Certificate of Incorporation and Bylaws as from time to time adopted, approved or amended.

(b)——Each Member acknowledges that it has the responsibility to plan and design its bulk power system and conduct its operations, consistent with its registration, in compliance with ERO Reliability Standards, Regional Reliability Standards and Regional Variances consistent with applicable laws, regulations, permits and licenses.

(c)——Each Member agrees to submit such data and reports as required by NPCC in order to perform compliance enforcement obligations delegated to it by the ERO, subject to established procedures and to the terms of applicable confidentiality agreements.

(d)——In addition, each Full Member shall:

(i) plan and design its bulk power system in compliance with Criteria, Guides, and Procedures, generation and transmission facilities on which faults or disturbances can have a significant adverse impact outside of the local area, as identified utilizing a reliability impact-
based methodology, in compliance with criteria, guides and procedures established by NPCC and applicable ERO Standards;

(ii) — conduct its operations in compliance with Criteria, Guides, and Procedures established by NPCC and applicable ERO Standards, and consistent with applicable laws, regulations, permits and licenses;

(iii) — assure that, whenever it enters into arrangements with non-members which could have an impact on the reliability of the international, interconnected Bulk Power System in Northeastern North America, the arrangements will not adversely impact the ability of the Full Members to comply with regionally-specific more stringent reliability criteria established by NPCC, ERO Standards, or the criteria of regional reliability organizations established in areas in which the facilities used for such arrangements are located;

(iv) — notify NPCC of its existing facilities and operating procedures and of its plans for major additions or modifications affecting the operation of the interconnected systems; and shall report to NPCC any decision as to significant alterations or changes proposed for their respective electric systems, whether in generation, transmission, inter-system communication or control and protective equipment, or in operating procedures; such report to be submitted promptly and, except in cases of emergency, before final commitments are undertaken or changes in operating procedures become effective;

(v) — promptly notify NPCC and all other Members in writing or electronically if its bulk power system generation and transmission facilities on which faults or disturbances can have a significant adverse impact outside of the local area, as identified utilizing a reliability impact-based methodology, are not being designed or operated, or its operations are not being conducted in compliance with Criteria, Guides, and Procedures established by NPCC, stating its reasons, and providing its plan and schedule to achieve compliance;

(vi) — submit such data and reports as required by the Reliability Compliance and Enforcement Program and to abide by the compliance assessments and sanctions
prescribed by NPCC’s enforcement procedures, subject to Alternative Dispute Resolution; and

(vii) (vii)—undertake and perform the administrative and financial obligations described in Article XIII of these Bylaws.

9.2  B. Standards Development Procedure. NPCC shall develop a Regional Reliability Standards Development Procedure that provides the design-basis approach to a consensus building process by which NPCC may develop Regional Reliability Standards and Regional Variances to be proposed to the ERO for adoption, under delegated authority by the FERC and the Canadian Provincial regulatory and/or governmental authorities.

9.3  C. Procedures for Enforcing Compliance with Reliability Standards. Where regulatory approval has been obtained or governmental authority has been provided, upon the determination of the NPCC Board that a user, owner or operator of the bulk power system has violated a reliability standard, NPCC shall enforce compliance for such violations, pursuant to procedures and processes that shall be specified in the NPCC NERC Compliance Monitoring and Enforcement Program. Such procedures and processes shall provide for reasonable notice and opportunity for hearing. Any sanction imposed for a violation of a Reliability Standard shall bear a reasonable relation to the seriousness of the violation and shall take into consideration circumstances surrounding the violation and efforts of the owner, operator, or user of the bulk power system to remedy the violation in a timely manner. Subject to any necessary action by any applicable governmental authorities, no sanction imposed for a violation of a reliability standard shall take effect until the thirty-first day after the NPCC Board, where authorized by law or agreement, files with the FERC or other applicable Canadian Provincial regulatory and/or governmental authorities notice of the sanction and the record of the proceedings in which the violation and sanction were determined, or such other date as ordered by the FERC or other applicable Canadian Provincial regulatory and/or governmental authorities or as prescribed by applicable law.

ARTICLE X - FULL MEMBERS: ENFORCEMENT OF MANDATORY COMPLIANCE WITH REGIONALLY-SPECIFIC CRITERIA

10.1  X. Full Members: Compliance Enforcement of Mandatory Compliance With Regionally-Specific Criteria. Subject to approval of the Full Members, NPCC shall establish an NPCC Reliability Criteria Compliance and Enforcement Program, including matrices for measuring compliance, levy non-monetary sanctions, and developing procedures for Alternative Dispute Resolution. Such program shall be administered by the NPCC Board. The Reliability Coordinating Committee, with the full cooperation of each Member, shall expeditiously evaluate, as appropriate, alterations or measures designed to correct any assessed non-compliance and shall report such studies to the NPCC Board.
ARTICLE XI - MEETINGS

11.1 XI. Meetings. Meetings of NPCC may be held on such dates as the Board may from time to time determine and shall be held in such places as the Board may from time to time designate. Special meetings may be called from time to time by the Board, or by a number of Members constituting at least ten percent (10%) of the Members on the roster of Members maintained by NPCC, which number shall include Members in at least four (4) of the Voting Sectors. Notice of all meetings, stating the time and place, shall be given by NPCC in writing to each Member by issuing the notice at least one (1) week prior to the date of the meeting. The Secretary, Assistant Secretary, or, in their absence, a secretary pro tempore designated by the Board Chair or the President and CEO, shall keep the records of NPCC meetings.

11.2 Proxies. When appropriate, the membership, the Board and the committees may use proxies or teleconference facilities. Members, Directors and committee members may appoint a proxy, consistent with NPCC proxy procedures, to vote or otherwise act for such Member, Director or committee member at any meeting. Such participation by proxy shall constitute attendance for purposes of quorum requirements.

11.3 Action by Remote Communication. A meeting among the Members or the Board by means of a communication through which the participants may simultaneously hear each other during the conference shall constitute a meeting of the Members or the Board, as the case may be, if the same notice is given of the conference as would be required for a meeting and if the number of persons participating in such conference constitute a quorum. Participation in any meeting by this means shall constitute personal presence at such meeting.

ARTICLE XII - BUDGET

12.1 XII. Annual Budget. The Board shall prepare or cause to be prepared an annual budget for the administrative and other expenses of NPCC, including the expenditures for the fiscal year for any material special projects undertaken by NPCC and reasonable and proper reserves and provisions for contingencies, an accompanying business plan for NPCC, and a funding mechanism including any supplemental funding mechanism, for each fiscal year. The annual budget, business plan, and funding mechanism of NPCC shall be developed in the form and format and on the schedule stipulated by the ERO for a fiscal year commencing on January 1 and ending on December 31. Each annual budget, business plan, and funding mechanism shall be approved by the Board at a regular meeting or a special meeting of the Board duly called for that purpose. The Board shall approve each annual budget, business plan, and funding mechanism on or before the date stipulated by the ERO during the year prior to the start of the fiscal year in order to allow for timely submittal of the approved annual budget, business plan, and funding mechanism to the FERC and the applicable Canadian Provincial regulatory and/or governmental authorities.

12.2 Budget Remands. If the ERO or a regulatory and/or governmental authority by order remands an annual budget, business plan, or annual, modified, or supplemental funding
mechanism, the Board shall promptly address such order through appropriate follow-up measures with the Members and regulatory and/or governmental authorities.

12.3 **Criteria Services Budget.** Each Full Member shall be notified of the annual administrative expense budget for the criteria services division, on or before December 1st of the preceding year.

**ARTICLE XIII - FUNDING**

13.1 **Funding Sources.** NPCC’s annual administrative expenses, including any special assessments approved by the Board, shall be apportioned and funded as follows:

A. Funding of NPCC General Member regional entity division activities shall be through mechanisms established by the ERO, FERC and applicable Canadian Provincial regulatory and/or governmental authorities.

B. General Members shall not be assessed an annual membership fee.

C. Full Members, other than Full Members that perform the Balancing Authority function, shall not be assessed an annual membership fee.

D. Full Members that perform the Balancing Authority function shall be assessed and pay a proportional share of the expenses for non-statutory criteria services in proportion to the ratio of the second previous year’s Net Energy for Load within the Balancing Authority Area to the aggregate Net Energy for Load within all Balancing Authority Areas in Northeastern North America. NPCC will directly assign non-statutory criteria services costs to a Balancing Authority Area or entity where significant costs are incurred by NPCC for such Balance Authority Area or entity.

E. No Full Member shall, without its consent, be responsible for expenses of NPCC in any one calendar year in excess of its assessed portion of the amount budgeted for non-statutory criteria services for that year; provided, however, that special assessments may be separately budgeted and their cost allocated by the Board to the Full Members that perform the Balancing Authority function.

XIV. **Termination of Membership and Cessation of Non-Statutory Criteria Services**

**ARTICLE XIV - TERMINATION OF MEMBERSHIP AND CESSATION OF CRITERIA SERVICES DIVISION RELIABILITY ACTIVITIES**

14.1 A.—Termination. All General Members and Full Members, other than Full Members that perform the Balancing Authority function, may terminate their membership in NPCC at any time upon fifteen (15) days’ written or electronic notice without liability to NPCC.
A Full Member that performs the Balancing Authority function may terminate its rights and obligations under these Bylaws (other than its obligation to pay its proportionate share of the non-statutory Criteria Services division expenses of NPCC, including special assessments, if applicable, for the full calendar year within which such termination is effective) at any time upon one (1) year’s written notice to the President and CEO; whereupon, it shall cease to be a Full Member of NPCC as of the date such termination is effective. The President and CEO shall promptly inform all Members of receipt of any such notices.

14.2 B. Cessation of Non-Statutory Criteria Services Division Reliability Activities. The Full Members of NPCC may elect by a majority vote to cease non-statutory criteria services Criteria Services division reliability activities.

ARTICLE XV - CONFLICTS OF INTEREST

15.1 XV. Conflicts of Interest Policy. NPCC has developed a Code of Conduct that sets forth NPCC policies with respect to, among other things, conflicts of interest. On an annual basis, Directors shall evidence their compliance with NPCC conflict of interest principles by either: (i) signing an Individual Participant Implementation Agreement and thereby agreeing to comply with NPCC’s Code of Conduct to the best of his/her ability; or (ii) agreeing that the execution of a Member Entity Implementation Agreement by the employer of such Board member evidences the Board member’s agreement to be bound by its employer’s Code of Conduct when performing NPCC activities. The Board shall establish similar Code of Conduct compliance requirements for NPCC staff and membership personnel participating on committees, task forces, and working groups as appropriate.

XVI. General

ARTICLE XVI - GENERAL

16.1 A. Member Liability. No Member shall be liable for the failure of any other Member to perform its obligations hereunder.

16.2 B. No Personal Liability. No NPCC officer, member of the Board or member of any other NPCC committee or group, or employee of NPCC shall be personally liable to NPCC or any member thereof, for damages for breach of any duty owed to NPCC or any member thereof, except for liabilities arising from breach of any duty based upon an act or omission (i) in breach of the duty of loyalty owed to NPCC or any individual member, (ii) not in good faith or involving a knowing violation of law, or (iii) resulting in receipt of an improper personal benefit by such NPCC officer, member of the Board or member of any other NPCC committee or group, or employee of NPCC. Neither the amendment nor repeal of this paragraph, nor the adoption of any provision of these Bylaws inconsistent with this paragraph, shall eliminate or reduce the protection offered by this paragraph to an NPCC officer, member of the Board or member of any other such NPCC committee or group, or employee of NPCC in respect of any matter which occurred, or any cause of action, suit or claim which, but for this paragraph, would have accrued or arisen, prior to such amendment, repeal, or adoption.

16.3 Binding Nature. Those entities listed as Members on Schedule A and subsequent applicants granted membership in NPCC shall be deemed to have accepted and to be
bound by all the terms and conditions of these Bylaws, as adopted on July 24, 2007, [_______], 2011.

ARTICLE XVII - CONTRACTS, CHECKS, DEPOSITS

17.1 Contracts. The Board may authorize, by resolution, any officer or officers, agent or agents of NPCC, in addition to the officers so authorized by these Bylaws, to enter into any contract or execute and deliver any instrument in the name of and on behalf of NPCC, and such authority may be general or confined to specific instances.

17.2 Checks, Drafts or Orders. All checks, drafts or orders for the payment of money, notes or other evidences of indebtedness issued in the name of NPCC shall be signed by such officer or officers, or agent or agents of NPCC and in such manner as shall from time to time be determined by resolution of the Board. In the absence of such determination by the Board, such instruments shall be signed by the President and CEO.

17.3 Deposits. All funds of NPCC shall be deposited from time to time to the credit of NPCC in such banks, trust companies or other depositories as the Board may select.

ARTICLE XVIII - DISSOLUTION

18.1 Distribution of Assets. Upon dissolution of NPCC, in accordance with paragraph EIGHTH of the Certificate of Incorporation, the remaining assets of NPCC after payment of debts shall be distributed in the manner determined by the Board, provided that (i) no part of the assets shall be distributed to any Director, and (ii) the distribution of assets shall be consistent with the requirements of Section 501(c)(6) of the United States Internal Revenue Code of 1986, as amended.

ARTICLE XIX - AMENDMENT OF BYLAWS

19.1 Amendment of Bylaws. These Bylaws may be modified, amended or repealed by an affirmative vote of two-thirds (2/3) of the Members entitled to vote at a meeting at which quorum is present, or by electronic voting in accordance with Section 8.5. Written notice of the subject matter of the proposed changes to the Bylaws shall be provided, as appropriate, to the Members no less than fourteen (14) nor more than sixty (60) days prior to the date of the meeting of the Members at which the vote is to be taken. Any modification, amendment or repeal of these Bylaws shall be subject to any application requirements for filing with or approval by NERC and FERC and other applicable governmental authority.

ARTICLE XX - EFFECTIVE DATE

20.1 Effective Date. These Bylaws shall take effect on [_______], 2011.
SCHEDULE A – MEMBERS OF NPCC

[to be attached]
1. Selection of Director Candidates

In selecting candidates to serve as Stakeholder Directors and Independent Directors on the NPCC Board of Directors ("Board"), NPCC's Corporate Governance and Nominating Committee ("CGNC") will endeavor to find individuals of high integrity who have a solid record of accomplishment in their chosen fields and who display the independence of mind and strength of character to effectively represent the best interests of NPCC. Candidates will be selected for their ability to exercise good judgment, and to provide practical insights and diverse perspectives. Consistent with its charter, the CGNC is responsible for screening director candidates, establishing criteria for nominees, and recommending a slate of nominees to the Board for consideration. The slate of director nominees will be presented to the Members for approval at the Annual Meeting of Members.

2. Criteria for Board Service

The CGNC will consider and recruit candidates for director nominees based upon recommendations from Members, current directors, NPCC management, outside consultants or search firms engaged for the purpose, and any other source recommended by the Board. All candidates recommended will be evaluated for nomination based on the criteria set forth below:

(a) Stakeholder Directors must reflect the geographic diversity of the NPCC Region, which comprises the State of New York, the six New England States of the United States, and the Canadian Provinces of Ontario, Québec, New Brunswick and Nova Scotia.

(b) Directors must possess corporate and business experience at the senior-executive level, or the equivalent thereof.

(c) Each Stakeholder Director must be an officer or senior executive-level employee of a Member of NPCC.

(d) Each Independent Director must be an individual who:

   (i) is not an officer or employee of NPCC;

   (ii) is not an officer, director or employee of a Member;

   (iii) is not an officer, director or employee of any entity that would reasonably be perceived as having a direct financial interest in the outcome of Board decisions; and

   (iv) does not have a relationship that would interfere with the exercise of independent judgment in performing the responsibilities of a director of NPCC.

(e) Directors must have no actual or potential conflicts of interests that would or could interfere with the diligent performance of the responsibilities of a Board member in the best interests of NPCC.
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AMENDED AND RESTATED BYLAWS
OF
NORTHEAST POWER COORDINATING COUNCIL, INC.
(a New York not-for-profit corporation)

Adopted on May 18, 2006
Amended on July 24, 2007
and [___________], 2011
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Schedule A – List of NPCC Members
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AMENDED AND RESTATED BYLAWS

OF

NORTHEAST POWER COORDINATING COUNCIL, INC.
(a New York not-for-profit corporation)

ARTICLE I - DEFINITIONS

1.1 Definitions. As used herein, the following terms have the respective meanings set forth below:

“Affiliate” means, with respect to any entity, any other entity that, directly or indirectly, through one or more intermediaries, controls, or is controlled by, or is under common control with, such entity, as determined in the sole discretion of the Board. For this purpose, “control” may be presumed by the direct or indirect ownership of ten percent (10%) or more of the outstanding voting capital stock or other equity interests having ordinary voting power. Notwithstanding the foregoing, “Affiliate” excludes any entity wholly-owned or controlled by a Canadian Provincial government.

“Board” means the Board of Directors of NPCC.

“Board Chair” means the independent non-executive chairman of the Board who is retained by NPCC pursuant to a separate Board-approved agreement.

“Bulk Power System” shall have the meaning in the United States set forth in Section 215 of the Federal Power Act, as amended (16 U.S.C. § 824 et seq.), and such meaning in Canada as is consistent with applicable Provincial regulatory and/or governmental authority determinations.

“Bylaws” means these Amended and Restated Bylaws of NPCC, as approved by the Members of NPCC on [_______], 2011 and effective as of [_______], 2011.

“Certificate of Incorporation” means the Certificate of Incorporation of NPCC filed with the Secretary of State of the State of New York, as may be amended from time to time.

“FERC” means the Federal Energy Regulatory Commission.

“Hearing Body” means a group comprising the Hearing Officer and two (2) Independent Directors (excluding the Board Chair) which has been authorized by NPCC to conduct and render decisions in a formal compliance hearing of any entity registered in the NERC compliance registry who is the subject of a notice of alleged violation, proposed penalty or sanction, contested mitigation plan or contested remedial action directive.

“Hearing Officer” means an individual employed or contracted by NPCC and designated by NPCC to preside over formal compliance hearings.
“Independent Director” means a director who satisfies the “independence” criteria in Section 6.7(b) and serves in Sector 8 (Independent Directors) of the Board.

“NERC” means the North American Electric Reliability Corporation, or any successor entity, which has been certified by FERC as the ERO pursuant to Section 215 of the Federal Power Act, as amended (16 U.S.C. § 824 et seq.).

“Northeastern North America” means the geographical area within the perimeter border enclosing the State of New York, the six New England States of the United States, and the Canadian Provinces of Ontario, Québec, New Brunswick and Nova Scotia, including any radial load or generation connecting to these systems.

“NPCC” means Northeast Power Coordinating Council, Inc., or any successor entity.

“Stakeholder Director” means a director who serves in one of the seven (7) stakeholder sectors of the Board described in Section 4.4.

1.2 Additional Defined Terms. Terms not defined in these Bylaws shall have the definitions set forth in the Federal Power Act, Part 39 of the regulations of the FERC, as further clarified in FERC’s April 19, 2007 Order 119 FERC ¶ 61,060, and if not defined in any of those sources, shall be defined in accordance with their commonly understood and used technical meanings in the electric power industry, including applicable codes and standards.

ARTICLE II - OFFICES

2.1 Principal Office. The principal office of NPCC shall be located in New York County, State of New York.

ARTICLE III - PURPOSE

3.1 Not-for-Profit Corporation. NPCC is operated as a New York not-for-profit corporation and is organized pursuant to the Not-for-Profit Corporation Law of the State of New York ("N-PCL").

3.2 Purpose. The purpose of NPCC is to promote and enhance the reliable and efficient operation of the international, interconnected Bulk Power System in Northeastern North America through (i) the development of Regional Reliability Standards and compliance assessment and enforcement of continent-wide and Regional Reliability Standards, coordination of system planning, design and operations, and assessment of reliability, pursuant to an agreement with the Electric Reliability Organization ("ERO") which designates NPCC as a Regional Entity and delegates authority from FERC, and by Memoranda of Understanding with applicable Canadian Provincial regulatory and/or governmental authorities (collectively, “Regional Entity activities”), and (ii) the establishment of regionally-specific reliability criteria, and the monitoring and enforcement of compliance with such criteria (collectively, “Criteria Services activities”). In the development of regionally-specific reliability criteria, NPCC, to the extent possible, facilitates the attainment of fair, effective and efficient competitive electric markets.
ARTICLE IV - MEMBERSHIP

4.1 List of Members. The Members of NPCC are listed on Schedule A attached hereto.

4.2 Eligibility. Upon suitable application describing the nature and activities of the applicant, additional entities shall be accepted by the Board as Members in the appropriate categories, defined as follows:

(1) General Membership is voluntary and is open to any person or entity, including any entity participating in the Registered Ballot Body of the ERO that has an interest in the reliable operation of the Northeastern North American Bulk Power System. General Members that are also registered entities within the NPCC Region are subject to compliance with reliability standards, consistent with their registration, and are also entitled to receive additional services from the Regional Entity division of NPCC.

(2) Full Membership shall be available to entities which are General Members that also participate in electricity markets in the international, interconnected bulk power system in Northeastern North America. Independent system operators (“ISOs”), regional transmission organizations (“RTOs”), Transcos and other organizations or entities that perform the Balancing Authority function operating in Northeastern North America are expected to be Full Members of NPCC. The New York State Reliability Council and any other sub-regional reliability councils which may be formed are also expected to be Full Members. Full Members are subject to compliance with regionally-specific more stringent reliability criteria for their generation and transmission facilities on which faults or disturbances can have a significant adverse impact outside of the local area and which are identified utilizing a reliability impact-based methodology. Full Members are also subject to compliance with reliability standards, and are entitled to receive additional services from the Criteria Services division of NPCC.

4.3 Application as a Member.

(a) Any person or entity that is eligible to become a Member of NPCC in accordance with Section 4.2 may become either a General Member or a Full Member by completing and submitting to NPCC a membership application on a form prescribed by the Board. Any person or entity that applies to NPCC as a Member shall comply with the conditions and obligations of membership specified in these Bylaws. As an additional condition of membership in NPCC, each person or entity registering as a Member shall execute an agreement with NPCC, in a form to be specified by the Board, that such person or entity will hold harmless all Directors, officers, employees and agents of NPCC, as well as volunteers participating in good faith in the activities of NPCC, to the extent permitted by U.S. Federal or Canadian Provincial laws, rules and regulations, for any injury or damage caused by any act or omission of any Director, officer, employee, agent or volunteer in the course of performance of his or her
duties on behalf of NPCC, other than for acts of gross negligence, intentional misconduct or a
breach of confidentiality.

(b) If not a natural person, the Member shall designate a representative and an
alternate representative with authority to receive notices, cast votes, execute waivers and
consents, and enter into binding agreements on behalf of the Member. NPCC shall maintain a
current roster of the Members of NPCC, including each Member’s designated representative and
alternate representative. From time to time, the Board may establish a date by which Members
shall submit their application renewals. All Members shall confirm their applications within
thirty (30) calendar days of the date of receipt of request by NPCC, using an application renewal
form prescribed by the Board. Any Member that has not submitted an application renewal
within thirty (30) calendar days following the date established by the Board shall be removed
from the NPCC roster. NPCC shall notify any Member that is removed from the roster of
Members of such removal, by written notice sent to such former Member’s last known address
on the records of NPCC.

4.4 Voting. Members are eligible to vote in one of the seven (7) stakeholder voting
sectors described below:

Sector (1). Transmission Owners: This voting sector shall consist of any entity
within Northeastern North America that owns at least 200 circuit miles of
integrated transmission facilities, or has an Open Access Transmission Tariff or
equivalent on file with the FERC or the appropriate regulatory or governmental
authority. This sector includes transmission owners that have placed their
transmission under the operational control of an ISO/RTO, independent
transmission companies and merchant transmission owners/developers.

Sector (2). Reliability Coordinators: This voting sector shall consist of any
entity within Northeastern North America certified as a Reliability Coordinator.

Sector (3). Transmission Dependent Utilities (“TDUs”); Distribution Companies
and Load-Serving Entities (“LSEs”). This voting sector shall consist of entities
within Northeastern North America that are:

(a) Entities with a regulatory contract, or other legal obligation to
serve wholesale aggregators or end-use customers, and that depend
primarily on the transmission systems of third parties to provide
this service;

(b) Agents or associates that represent groups of TDUs;

(c) Electric distribution companies;

(d) Entities serving end-use customers under a regulated tariff, a
contract governed by a regulatory tariff, or other legal obligation to
serve; or
(e) Members of a generation and transmission ("G&T") cooperative or a joint-action agency permitted to designate the G&T or joint action agency to represent such entities in this sector.

**Sector (4). Generator Owners:** This voting sector shall consist of entities within Northeastern North America that are affiliated and/or independent generators.

**Sector (5). Marketers, Brokers and Aggregators:** This voting sector shall consist of entities within Northeastern North America that are:

(a) Entities providing energy to end-use customers under a power marketing agreement or other authorization not classified as a regulated tariff;

(b) Entities that buy, sell, or broker energy and related services for resale in wholesale or retail markets, whether a non-jurisdictional entity operating within its charter or an entity licensed by a jurisdictional regulator; or

(c) Generation and transmission cooperatives and joint-action agencies that perform an electricity broker, aggregator, or marketer function.

**Sector (6). State and Provincial Regulatory and/or Governmental Authorities.** This voting sector shall consist of State and Provincial regulatory or governmental authorities within Northeastern North America.

**Sector (7). Sub-Regional Reliability Councils, Customers, Other Regional Entities and Interested Entities:** This voting sector shall consist of:

(a) Any entity within Northeastern North America authorized by an appropriate regulatory and/or governmental authority to be a Sub-Regional Reliability Council;

(b) Entities or customers that take delivery of energy that is not purchased for resale within Northeastern North America;

(c) Agents or associations representing groups of large end users within Northeastern North America;

(d) Agents, state consumer advocates, or other advocate groups representing groups of small customers within Northeastern North America;

(e) Any other delegated Regional Entity; or

(f) Any person or entity, including any entity participating in the Registered Ballot Body of the ERO, that has an interest in the
reliable operation of the bulk power system in Northeastern North America.

4.5 Assignment to Voting Sector. A new applicant for membership shall request to be assigned to a stakeholder voting sector, subject to Board approval. An applicant may request to be assigned to any stakeholder voting sector so long as membership in that stakeholder voting sector is consistent with the applicant's business or other activities within the NPCC region. Multiple memberships of separate business functions of an entity are permitted, with each business function assigned to the appropriate separate sector. Each such business function may designate its own representative and alternate, however, no representative and alternate can represent more than one business function of an entity in a stakeholder voting sector. A consultant, attorney, agent, vendor, trade or industry association, state, provincial or local consumer advocate organization that provides services to or otherwise represents the interests of the Members of one or more stakeholder voting sectors may elect to be assigned to one such stakeholder voting sector subject to Board approval. Entities may request to change their stakeholder voting sector designation during an Annual Meeting of Members of NPCC, subject to Board approval.

4.6 Term of Membership. Membership in NPCC shall be retained so long as a Member meets its respective qualifications, obligations, and conditions of membership as set forth in this Article IV.

ARTICLE V - ORGANIZATION OF NPCC

5.1 Member Representatives. Each Member shall designate a senior executive level representative and an alternate representative with full authority to act on its behalf in carrying out the work of NPCC.

5.2 Board of Directors. The business and affairs of NPCC shall be managed under the direction of the Board.

5.3 Officers. The officers of NPCC shall consist of a President and Chief Executive Officer (CEO), a Secretary and a Treasurer, with assistants as appropriate, and such additional officers as may be approved by the Members. Officers, except for the President and CEO, shall hold office for one (1) year or until the next Annual Meeting of Members of NPCC and until their successors are duly elected and qualified.

5.4 President and CEO. NPCC shall employ a President and CEO and staff, as required, to carry out NPCC’s mission and to perform the functions of NPCC. The President and CEO shall be appointed by the Board and shall serve at the Board’s discretion. In the event of a vacancy in the presidency, the Board shall appoint an interim President and CEO who shall serve until such time as the Board appoints a new President and CEO. The authority and responsibilities of the President and CEO shall be defined by the Board.

5.5 Vacancies.

(a) In the event a vacancy occurs in the Board, or in the office of Co-Vice Chair, Secretary, or Treasurer in the interim between Annual Meetings of Members of NPCC,
the Board Chair may designate (i) a person from the same stakeholder voting sector to fill such vacancy with the approval of a majority vote of the Directors, or (ii) in the case of a vacancy in the office of the Secretary or Treasurer, from outside of NPCC to fill such vacancy with the approval of a majority vote of the Directors.

(b) In the event a vacancy occurs in the office of Board Chair in the period between Annual Meetings of Members of NPCC, the Board may fill such vacancy by a two-thirds (2/3) affirmative majority of the weighted sector votes, with each Director casting one (1) vote within the applicable sector, at a meeting of the Board at which a quorum is present. The term of office of the persons designated to fill any such vacancy shall expire on the date of the next subsequent Annual Meeting of Members of NPCC. The authority and responsibilities of the Board Chair shall be defined by the Board and set forth in a separate agreement approved by the Board.

5.6 NPCC Activities. NPCC engages in (i) Regional Entity activities which are conducted by its Regional Entity division, and (ii) Criteria Services activities which are conducted by its Criteria Services division.

ARTICLE VI - BOARD OF DIRECTORS

6.1 Hybrid Board.

(a) The Board shall consist of fourteen (14) Stakeholder Directors, two (2) Independent Directors, an independent Board Chair and the President and CEO.

(b) While serving on the Board, the President and CEO shall not be entitled to vote on any Board matters.

(c) Two (2) Co-Vice Chairs from different voting sectors on the Board shall be selected by the Directors and approved by a vote of the entire membership. In the temporary absence of the Board Chair, a Vice Chair designated by a two-thirds (2/3) vote of the Directors shall perform the duties of the Board Chair. The Co-Vice Chairs shall retain the voting rights that they otherwise held by virtue of serving as a Director.

6.2 Term and Compensation.

(a) The term of office of each Stakeholder Director shall be two (2) years. Initial terms of Stakeholder Directors shall be staggered by the Board so that these Board members serve initial terms of one (1) or two (2) years. There shall be no limit on the number of terms which may be served by any Stakeholder Director. Stakeholder Directors shall serve without compensation, including when performing duties of a Co-Vice Chair.

(b) The term of office of each Independent Director shall be two (2) years. Independent Directors may serve up to three (3) terms for a maximum of six (6) years. Each Independent Director shall be entitled to receive compensation as the Board may from time to time determine in its sole discretion.
(c) The term of office of the Board Chair shall be two (2) years, with no limitations on the number of terms that may be served. Compensation arrangements of the Board Chair shall be contained in a separate written agreement approved by the Board.

6.3 Powers and Duties.

(a) The Board shall develop NPCC policies, direct the activities of NPCC, accept additional entities as Members, review and approve or modify Member voting sector assignment, and make assignments to the committees of NPCC. The Board shall (i) approve a Regional Delegation Agreement, and any amendments thereto, with the ERO that delegates authority from FERC and any additional agreements with appropriate Canadian Provincial regulatory and/or governmental authorities, (ii) approve and oversee NPCC’s Regional Reliability Standards Development Process and submit Regional Standards to the ERO for adoption by FERC and appropriate Canadian Provincial regulatory and/or governmental authorities, (iii) approve the NPCC Compliance Monitoring and Enforcement Program and oversee the assessment and enforcement of mandatory compliance with Reliability Standards consistent with the Regional Delegation Agreement and agreements with Canadian Provincial regulatory and/or governmental authorities, and (iv) oversee NPCC’s assessment and enforcement of mandatory compliance with regionally-specific more stringent reliability criteria through administration of the NPCC Reliability Compliance and Enforcement Program. The duties of the Board shall also include consideration and resolution of budgetary matters, including the levying of any special assessments and the determination of any annual membership fee for Full Members. Notwithstanding the foregoing, the Board may not amend these Bylaws or establish, modify or eliminate any of NPCC’s Regional Reliability Standards or regionally-specific more stringent reliability criteria; nor may the Board add, modify, or eliminate voting sectors established pursuant to these Bylaws.

(b) To carry out the purposes of NPCC, the Board, acting through the President and CEO and NPCC staff, shall enlist such personnel from Members as may be necessary; and, within the limits of the annual budget, may employ such personnel, incur such administrative expenses, and retain such independent professional consulting services for NPCC and the committees of NPCC as it may deem desirable.

6.4 Board Composition. The Board shall consist of an independent Board Chair, the President and CEO, such officers as shall from time to time be determined by the Board, and Directors in eight (8) voting sectors comprising seven (7) stakeholder sectors and one (1) independent sector, as described below:

**Sector (1).** Transmission Owners (Maximum of 2, with no more than 1 per Balancing Authority Area)

**Sector (2).** Reliability Coordinators (Maximum of 2)

**Sector (3).** Transmission Dependent Utilities (“TDUs”); Distribution Companies and Load-Serving Entities (“LSEs”) (Maximum of 2)

**Sector (4).** Generator Owners (Maximum of 2)
Sector (5). Marketers, Brokers and Aggregators (Maximum of 2)

Sector (6). Regulators (Maximum of 2)

Sector (7). Sub-Regional Reliability Councils, Customers, Other Regional Entities and Interested Entities (Maximum of 2)

Sector (8). Independent Directors (Maximum of 2)

6.5 Quorum and Voting Requirements for the Board.

(a) At any meeting of the Board, attendance in person or by proxy by at least one-half (1/2) of the Stakeholder Directors in each of at least sixty percent (60%) of the stakeholders sectors and at least one (1) Independent Director shall constitute a quorum. Except as otherwise expressly provided in NPCC’s Certificate of Incorporation, these Bylaws or applicable law, actions by the Board shall be approved upon receipt of a two-thirds (2/3) affirmative majority of the weighted sector votes, with each Director casting one (1) vote within the applicable sector, at a meeting of the Board at which a quorum is present. The Board Chair shall also be entitled to cast one (1) vote during any meeting of the Board at which a quorum is present to prevent any deadlock. The following process shall be used to determine if there are sufficient affirmative votes:

- The number of votes cast is the sum of affirmative and negative votes, excluding abstentions.

- The number of affirmative votes cast in each voting sector will be divided by the sum of affirmative and negative votes cast in that voting sector to determine the fractional affirmative vote for each voting sector. Abstentions will not be counted for the purposes of determining the fractional affirmative vote for a voting sector.

- The sum of the fractional affirmative votes from all sectors divided by the number of sectors voting will be used to determine if a two-thirds (2/3) affirmative majority has been achieved. A sector will be considered as “voting” if any Director of the sector casts either an affirmative or a negative vote.

(b) An action of the Board will be approved if the sum of fractional affirmative votes from all sectors divided by the number of voting sectors is at least two-thirds (2/3).

6.6 Board Action Without Meeting. Any action required, or permitted to be taken at a meeting of the Board, may be taken without a meeting if the action is taken by all members of the Board. The action must be evidenced by one or more written consents (which may be in electronic form) describing the action taken, signed by each Director, and included in the minute book of NPCC. Any action taken under this Section 6.6 shall be deemed effective when the last Director signs the consent, unless the consent specifies a different effective date.
6.7 Election and Removal of Directors.

(a) The Initial Board shall be the persons named in the Certificate of Incorporation and shall serve until the first Annual Meeting of the Members. The Initial Board shall nominate a list of Stakeholder Directors consistent with the Board composition requirements set forth in Bylaws at such time. At the first meeting of the Members, the Members from each sector shall vote to elect the Stakeholder Directors in their respective sector. Stakeholder Directors shall be elected by a vote of the majority of the Members in the respective stakeholder sector. No stakeholder sector shall elect more than two Stakeholder Directors in such sector. No Member or any Affiliate of a Member may designate more than one (1) Stakeholder Director to represent such Member or Affiliate. Stakeholder Director candidates will be selected in accordance with the Rules of Procedure set forth in Schedule B.

(b) Individual Members may nominate an Independent Director candidate by petition. Each petition shall present only one Independent Director candidate who has met requirements in the Rules of Procedure set forth in Schedule B. Petitions shall be received by the Corporate Governance and Nominating Committee on a date set by the committee. The names on the petition shall reflect at least ten percent (10%) of the Members of NPCC as of January 1 of the year in which the election is to be held. Upon receipt of a valid petition, the Corporate Governance and Nominating Committee shall add the petitioned candidate's name to the slate of director nominees to be presented to the Members for approval at the Annual Meeting of Members.

(c) Independent Directors shall be nominated in accordance with the Rules of Procedure set forth in Schedule B and recommended by the Board to the Members for consideration and approval. In order to contribute to the effective functioning of the Board and NPCC, Independent Directors will be drawn from diverse backgrounds and will possess a broad range of industry expertise, perspectives, experiences, skill sets and knowledge. An individual is eligible to serve as an Independent Director if such individual (i) is not an officer or employee of NPCC, (ii) is not an officer, director or employee of a Member, (iii) is not an officer, director or employee of any entity that would reasonably be perceived as having a direct financial interest in the outcome of Board decisions, and (iv) does not have a relationship that would interfere with the exercise of independent judgment in performing the responsibilities of a director. Independent Directors shall be elected by an affirmative vote of the majority of the Members present at a meeting where a quorum exists.

(d) A Stakeholder Director may be removed for cause by at least two-thirds (2/3) of the Members in their respective sector at a regular meeting of the Members or at a special meeting called for that purpose; provided that there is a quorum of that sector’s Members present at that meeting; and provided, further, that there is a quorum of not less than a majority present at the meeting of Directors at which such action is recommended.

(e) An Independent Director may be removed for cause by the affirmative vote of at least two-thirds (2/3) of the Directors present at a meeting called for that purpose; provided that there is a quorum of not less than ten (10) Directors present at the meeting of Directors at which such action is taken.
For purposes of Section 6.7(d) and (e), grounds for removal “for cause” include, but are not limited to, failure to adequately perform Board duties and committee responsibilities, a felony conviction, misappropriation of funds, mental incapacity, and misconduct. In accordance with the N-PCL, an action to procure a judgment removing any Director for cause may also be brought by the Attorney-General of the State of New York.

6.8 Indemnification. Subject to the limitation set forth in Section 6.9 below, NPCC shall indemnify its Directors, officers, employees and other corporate agents, including volunteers participating in good faith in the activities of NPCC and persons serving on duly constituted committees of NPCC (collectively, “NPCC Indemnitees”), in each case, to the full extent from time to time permitted by the N-PCL and other applicable law. Such right of indemnification shall inure to the benefit of the legal representative of any NPCC Indemnitee. The foregoing right of indemnification shall be in addition to, and not in restriction or limitation of, any right such NPCC Indemnitee may have under applicable law (including the N-PCL).

6.9 Limitation on Indemnification. The maximum amount of losses (i.e., damages, judgments, fines, penalties, liability, costs and expenses, including reasonable attorneys’ fees and expenses) for which NPCC will be obligated to indemnify the NPCC Indemnitees under Section 6.8 will be the policy limit of directors and officers’ (“D&O”) liability insurance set forth in the D&O insurance policy maintained by NPCC.

ARTICLE VII - COMMITTEES AND HEARING BODY

7.1 Number of Committees. NPCC shall have such committees, subcommittees, task forces and other groups as the Board may deem appropriate, including a Regional Standards Committee (RSC), a Compliance Committee (CC), a Reliability Coordinating Committee (RCC), NPCC’s principal technical committee), a Public Information Committee (PIC) and a Finance and Audit Committee (FAC).

7.2 Finance and Audit Committee. The Finance and Audit Committee shall be comprised of at least three (3) members of the Board and shall include one (1) Director which shall be designated a finance and audit committee financial expert by the Board. A chairperson of the Finance and Audit Committee shall be designated by the Board from among the members of the committee.

7.3 Committee Structure. Committee members shall be nominated and approved by the Board in accordance with guidelines established by the Board. Quorum and voting rules applicable to the Board shall also apply to voting on any such NPCC decision making committees, unless otherwise determined by the Board. Each committee shall establish a charter or scope of work, which shall be presented to the Board for approval.

7.4 Hearing Body. The Hearing Body shall conduct all compliance proceedings in accordance with the hearing procedures set forth in the NERC Hearing Procedure.

ARTICLE VIII - MEMBERS’ VOTING RIGHTS

8.1 Quorum and Voting Requirements for Meetings of Members.
(a) At any meeting of the Members of NPCC, attendance in person or by proxy by one-half (1/2) of the Members in each of at least sixty percent (60%) of the stakeholder voting sectors on the roster of Members maintained by NPCC shall constitute a quorum. Except as otherwise expressly provided in NPCC’s Certificate of Incorporation, these Bylaws or applicable law, actions by the Members of NPCC shall be approved upon receipt of a two-thirds (2/3) affirmative majority vote of the sectors at a meeting of the Members of NPCC at which a quorum is present, where (i) each Member shall have one (1) vote within a sector, except that if less than one-half (1/2) of the Members in a sector are present, in person or by proxy, at the meeting, the vote of that sector shall be weighted by a percentage equal to the number of Members of the sector present in person or by proxy at the meeting divided by one-half (1/2) of the Members in the sector; (ii) the vote of each sector of NPCC shall be allocated for and against the proposed action based on the respective percentages of votes cast for and against the proposed action by the Members in that sector voting in person or by proxy; and (iii) the proportions of the votes of each sector allocated for and against the proposed action shall be summed to determine the total number of votes for and against the proposed action.

(b) The following process shall be used to determine if there are sufficient affirmative votes:

- The number of votes cast will be the sum of affirmative and negative votes, excluding abstentions.

- The number of affirmative votes cast in each sector will be divided by the sum of affirmative and negative votes cast to determine the fractional affirmative vote for each sector. Abstentions will not be counted for the purposes of determining the fractional affirmative vote for a sector.

- The sum of the fractional affirmative votes from all sectors divided by the number of sectors voting will be used to determine if a two-thirds (2/3) affirmative majority has been achieved. (A sector will be considered as “voting” if any Member of the sector casts either an affirmative or a negative vote.)

8.2 Waivers of Notice of Meetings of Members; Member Meeting Adjournments. Notice of a Meeting of Members need not be given to any Member who signs a waiver of notice, in person or by proxy, whether before or after the meeting. The attendance of any Member at a meeting, in person or by proxy, without protesting prior to the conclusion of the meeting the lack of notice of such meeting, shall constitute a waiver of notice of the meeting by such Member. When any Meeting of Members is adjourned to another time or place, it shall not be necessary to give notice of the adjourned meeting if the time and place to which the meeting is adjourned are announced at the meeting at which the adjournment is taken, and if at the adjourned meeting only such business is transacted as might have been transacted at the original meeting.

8.3 Actions Without a Meeting of Members. Any action, required or permitted to be taken at a Meeting of Members, may be taken without a meeting if the action is consented to in writing by the minimum number of Members that would be required to approve the action at a Meeting of Members at which all Members were present. The call for action without a Meeting
of Members may be initiated by the Board Chair or by a number of Members constituting at least ten percent (10%) of the Members on the roster of Members maintained by NPCC, which number shall include Members in at least four (4) of the voting sectors. Notice of the proposal for action without a meeting shall be provided to all Members on the roster of Members maintained by NPCC at least seven (7) days prior to the date established for the tabulation of consents. The Members shall receive written notice of the results within fourteen (14) days of the action vote, and all written responses of the Members shall be filed with the minutes of proceedings of Members.

8.4 Meeting of Members to be Open. Notice to the public of the dates, places, and times of Meetings of Members, and all non-confidential material provided to the Members, shall be posted on NPCC’s web site at approximately the same time that notice is given to the Members. Meetings of Members shall be open to the public, subject to reasonable limitations due to the availability and size of meeting facilities; provided that the meeting may be held in or adjourn to closed session to discuss matters of a confidential nature, including, but not limited to, personnel matters, compliance and enforcement matters, litigation, or commercially sensitive or critical energy infrastructure information of any entity.

8.5 Electronic Voting. Upon completion of applicable processes that permit parties to comment on the subject issue(s), electronic voting on matters before the Members, Board or any committee is permitted. A quorum will be determined to exist for purposes of conducting an electronic vote when NPCC receives completed ballots from two-thirds (2/3) of the total number of outstanding ballots. In the event that a quorum exists for purposes of an electronic vote but the matter has not been resolved, NPCC may continue to solicit additional responses in order to resolve the matter by electronic voting. In the event that quorum has not been achieved for purposes of an electronic vote, NPCC may continue to solicit electronic ballots, including abstentions, to obtain quorum and resolve the matter.

ARTICLE IX - MEMBERS’ RIGHTS AND OBLIGATIONS, AND ORGANIZATIONAL PROCESS

9.1 Members’ Rights and Obligations. All General and Full Members shall have the following rights and obligations:

(1) Rights:

(a) Attendance at all meetings of the general membership of NPCC; and, subject to procedures established by the committees and to the terms of applicable confidentiality agreements, attendance at meetings of NPCC’s committees, task forces and any other such NPCC groups.

(b) Access to minutes of each committee, subcommittee, task force or any other NPCC group, subject to procedures established by the committees and to the terms of applicable confidentiality agreements.

(c) Vote to amend these Bylaws in accordance with Section 19.1.
(d) Vote to establish, modify or eliminate NPCC Regional Reliability Standards and programs.

(e) For Full Members only: Vote to establish, modify or eliminate NPCC's regionally-specific more stringent reliability criteria.

(2) Obligations:

(a) Each Member shall agree, in writing, to accept the responsibility to promote, support, and comply with the purposes and policies of NPCC as set forth in its Certificate of Incorporation and Bylaws as from time to time adopted, approved or amended.

(b) Each Member acknowledges that it has the responsibility to plan and design its bulk power system and conduct its operations, consistent with its registration, in compliance with ERO Reliability Standards, Regional Reliability Standards and Regional Variances consistent with applicable laws, regulations, permits and licenses.

(c) Each Member agrees to submit such data and reports as required by NPCC in order to perform compliance enforcement obligations delegated to it by the ERO, subject to established procedures and to the terms of applicable confidentiality agreements.

(d) In addition, each Full Member shall:

(i) plan and design its generation and transmission facilities on which faults or disturbances can have a significant adverse impact outside of the local area, as identified utilizing a reliability impact-based methodology, in compliance with criteria, guides and procedures established by NPCC and applicable ERO Standards;

(ii) conduct its operations in compliance with criteria, guides and procedures established by NPCC and applicable ERO Standards, and consistent with applicable laws, regulations, permits and licenses;

(iii) assure that, whenever it enters into arrangements with non-members which could have an impact on the reliability of the international, interconnected Bulk Power System in Northeastern North America, the arrangements will not adversely impact the ability of the Full Members to comply with regionally-specific more stringent reliability criteria established by NPCC, ERO Standards, or the criteria of regional reliability organizations established in areas in which the facilities used for such arrangements are located;
(iv) notify NPCC of its existing facilities and operating procedures and of its plans for major additions or modifications affecting the operation of the interconnected systems; and shall report to NPCC any decision as to significant alterations or changes proposed for their respective electric systems, whether in generation, transmission, inter-system communication or control and protective equipment, or in operating procedures; such report to be submitted promptly and, except in cases of emergency, before final commitments are undertaken or changes in operating procedures become effective;

(v) promptly notify NPCC and all other Members in writing or electronically if its generation and transmission facilities on which faults or disturbances can have a significant adverse impact outside of the local area, as identified utilizing a reliability impact-based methodology, are not being designed or operated, or its operations are not being conducted, in compliance with Criteria, Guides, and Procedures established by NPCC, stating its reasons, and providing its plan and schedule to achieve compliance;

(vi) submit such data and reports as required by the Reliability Compliance and Enforcement Program and to abide by the compliance assessments and sanctions prescribed by NPCC’s enforcement procedures, subject to Alternative Dispute Resolution; and

(vii) undertake and perform the administrative and financial obligations described in Article XIII of these Bylaws.

9.2 Standards Development Procedure. NPCC shall develop a Regional Reliability Standards Development Procedure that provides the design-basis approach to a consensus building process by which NPCC may develop Regional Reliability Standards and Regional Variances to be proposed to the ERO for adoption, under delegated authority by the FERC and the Canadian Provincial regulatory and/or governmental authorities.

9.3 Procedures for Enforcing Compliance with Reliability Standards. Where regulatory approval has been obtained or governmental authority has been provided, upon the determination of NPCC compliance staff and verification by the President and CEO that a user, owner or operator of the Bulk Power System has violated a reliability standard, NPCC shall enforce compliance for such violation, pursuant to procedures and processes that shall be specified in the NERC Compliance Monitoring and Enforcement Program. Such procedures and processes shall provide for reasonable notice and opportunity for hearing. Any sanction imposed for a violation of a Reliability Standard shall bear a reasonable relation to the seriousness of the violation and shall take into consideration circumstances surrounding the violation and efforts of the owner, operator, or user of the Bulk Power System to remedy the violation in a timely
manner. Subject to any necessary action by any applicable governmental authorities, no sanction imposed for a violation of a reliability standard shall take effect (i) until the thirty-first (31st) day after NPCC, where authorized by law or agreement, files with the FERC or other applicable Canadian Provincial regulatory and/or governmental authorities notice of the sanction and the record of the proceedings in which the violation and sanction were determined, or (ii) such other date as ordered by the FERC or other applicable Canadian Provincial regulatory and/or governmental authorities or as prescribed by applicable law.

**ARTICLE X - FULL MEMBERS: ENFORCEMENT OF MANDATORY COMPLIANCE WITH REGIONALLY-SPECIFIC CRITERIA**

10.1 Compliance Enforcement. Subject to approval of the Full Members, NPCC shall establish an NPCC Reliability Criteria Compliance and Enforcement Program, including matrices for measuring compliance, levying non-monetary sanctions, and developing procedures for Alternative Dispute Resolution. Such program shall be administered by the Board. The Reliability Coordinating Committee, with the full cooperation of each Member, shall expeditiously evaluate, as appropriate, alterations or measures designed to correct any assessed non-compliance and shall report such studies to the Board.

**ARTICLE XI - MEETINGS**

11.1 Meetings. Meetings of NPCC may be held on such dates as the Board may from time to time determine and shall be held in such places as the Board may from time to time designate. Special meetings may be called from time to time by the Board Chair, the Board or by a number of Members constituting at least ten percent (10%) of the Members on the roster of Members maintained by NPCC, which number shall include Members in at least four (4) of the voting sectors. Except as provided in Section 19.1, notice of all meetings, stating the time and place, shall be given by NPCC in writing to each Member by issuing the notice at least one (1) week prior to the date of the meeting. The Secretary, Assistant Secretary, or, in their absence, a secretary pro tempore designated by the Board Chair or the President and CEO, shall keep the records of NPCC meetings.

11.2 Proxies. When appropriate, Members, Directors and committee members may appoint a proxy, consistent with NPCC proxy procedures, to vote or otherwise act for such Member, Director or committee member at any meeting. Such participation by proxy shall constitute attendance for purposes of quorum requirements.

11.3 Action by Remote Communication. A meeting among the Members or the Board by means of a communication through which the participants may simultaneously hear each other during the conference shall constitute a meeting of the Members or the Board, as the case may be, if the same notice is given of the conference as would be required for a meeting and if the number of persons participating in such conference constitute a quorum. Participation in any meeting by this means shall constitute personal presence at such meeting.

**ARTICLE XII - BUDGET**

12.1 Annual Budget. The Board shall prepare or cause to be prepared an annual budget for the administrative and other expenses of NPCC, including the expenditures for the
fiscal year for any material special projects undertaken by NPCC and reasonable and proper reserves and provisions for contingencies, an accompanying business plan for NPCC, and a funding mechanism including any supplemental funding mechanism, for each fiscal year. The annual budget, business plan, and funding mechanism of NPCC shall be developed in the form and format and on the schedule stipulated by the ERO for a fiscal year commencing on January 1 and ending on December 31. Each annual budget, business plan, and funding mechanism shall be approved by the Board at a regular meeting or a special meeting of the Board duly called for that purpose. The Board shall approve each annual budget, business plan, and funding mechanism on or before the date stipulated by the ERO during the year prior to the start of the fiscal year in order to allow for timely submittal of the approved annual budget, business plan, and funding mechanism to the FERC and the applicable Canadian Provincial regulatory and/or governmental authorities.

12.2 Budget Remands. If the ERO or a regulatory and/or governmental authority by order remands an annual budget, business plan, or annual, modified, or supplemental funding mechanism, the Board shall promptly address such order through appropriate follow-up measures with the Members and regulatory and/or governmental authorities.

12.3 Criteria Services Budget. Each Full Member shall be notified of the annual administrative expense budget for the Criteria Services division, on or about December 1 of the preceding year.

ARTICLE XIII - FUNDING

13.1 Funding Sources. NPCC’s annual administrative expenses, including any special assessments approved by the Board, shall be apportioned and funded as follows:

A. Funding of NPCC General Member Regional Entity division activities shall be through mechanisms established by the ERO, FERC and applicable Canadian Provincial regulatory and/or governmental authorities.

B. General Members shall not be assessed an annual membership fee.

C. Full Members, other than Full Members that perform the Balancing Authority function, shall not be assessed an annual membership fee.

D. Full Members that perform the Balancing Authority function shall be assessed and pay a proportional share of the expenses for criteria services in proportion to the ratio of the second previous year’s Net Energy for Load within the Balancing Authority Area to the aggregate Net Energy for Load within all Balancing Authority Areas in Northeastern North America. NPCC will directly assign Criteria Services division costs to a Balancing Authority Area or entity where significant costs are incurred by NPCC for such Balance Authority Area or entity.

E. No Full Member shall, without its consent, be responsible for expenses of NPCC in any one calendar year in excess of its assessed portion of the
amount budgeted for the Criteria Services division for that year; provided, however, that special assessments may be separately budgeted and their cost allocated by the Board to the Full Members that perform the Balancing Authority function.

**ARTICLE XIV - TERMINATION OF MEMBERSHIP AND CESSATION OF CRITERIA SERVICES DIVISION RELIABILITY ACTIVITIES**

14.1 **Termination.** All General Members and Full Members, other than Full Members that perform the Balancing Authority function, may terminate their membership in NPCC at any time upon fifteen (15) days’ written or electronic notice without liability to NPCC. A Full Member that performs the Balancing Authority function may terminate its rights and obligations under these Bylaws (other than its obligation to pay its proportionate share of the Criteria Services division expenses of NPCC, including special assessments, if applicable, for the full calendar year within which such termination is effective) at any time upon one (1) year’s written notice to the President and CEO; whereupon, it shall cease to be a Full Member of NPCC as of the date such termination is effective. The President and CEO shall promptly inform all Members of receipt of any such notices.

14.2 **Cessation of Criteria Services Division Reliability Activities.** The Full Members of NPCC may elect by a majority vote to cease Criteria Services division reliability activities.

**ARTICLE XV - CONFLICTS OF INTEREST**

15.1 **Conflicts of Interest Policy.** NPCC has developed a Code of Conduct that sets forth NPCC policies with respect to, among other things, conflicts of interest. On an annual basis, Directors shall evidence their compliance with NPCC conflict of interest principles by either: (i) signing an Individual Participant Implementation Agreement and thereby agreeing to comply with NPCC’s Code of Conduct to the best of his/her ability; or (ii) agreeing that the execution of a Member Entity Implementation Agreement by the employer of such Director evidences the Director’s agreement to be bound by its employer’s Code of Conduct when performing NPCC activities. The Board shall establish similar Code of Conduct compliance requirements for NPCC staff and membership personnel participating on committees, task forces, and working groups as appropriate.

**ARTICLE XVI - GENERAL**

16.1 **Member Liability.** No Member shall be liable for the failure of any other Member to perform its obligations hereunder.

16.2 **No Personal Liability.** No NPCC officer, member of the Board or member of any other NPCC committee or group, or employee of NPCC shall be personally liable to NPCC or any member thereof, for damages for breach of any duty owed to NPCC or any member thereof, except for liabilities arising from breach of any duty based upon an act or omission (i) in breach of the duty of loyalty owed to NPCC or any individual member, (ii) not in good faith or involving a knowing violation of law, or (iii) resulting in receipt of an improper personal benefit by such NPCC officer, member of the Board or member of any other NPCC committee or group, or employee of NPCC. Neither the amendment nor repeal of this paragraph, nor the adoption of
any provision of these Bylaws inconsistent with this paragraph, shall eliminate or reduce the protection offered by this paragraph to an NPCC officer, member of the Board or member of any other such NPCC committee or group, or employee of NPCC in respect of any matter which occurred, or any cause of action, suit or claim which, but for this paragraph, would have accrued or arisen, prior to such amendment, repeal, or adoption.

16.3 **Binding Nature.** Those entities listed as Members on Schedule A and subsequent applicants granted membership in NPCC shall be deemed to have accepted and to be bound by all the terms and conditions of these Bylaws, as adopted on [_______], 2011.

**ARTICLE XVII - CONTRACTS, CHECKS, DEPOSITS**

17.1 **Contracts.** The Board may authorize, by resolution, any officer or officers, agent or agents of NPCC, in addition to the officers so authorized by these Bylaws, to enter into any contract or execute and deliver any instrument in the name of and on behalf of NPCC, and such authority may be general or confined to specific instances.

17.2 **Checks, Drafts or Orders.** All checks, drafts or orders for the payment of money, notes or other evidences of indebtedness issued in the name of NPCC shall be signed by such officer or officers, or agent or agents of NPCC and in such manner as shall from time to time be determined by resolution of the Board. In the absence of such determination by the Board, such instruments shall be signed by the President and CEO.

17.3 **Deposits.** All funds of NPCC shall be deposited from time to time to the credit of NPCC in such banks, trust companies or other depositories as the Board may select.

**ARTICLE XVIII - DISSOLUTION**

18.1 **Distribution of Assets.** Upon dissolution of NPCC, in accordance with paragraph EIGHTH of the Certificate of Incorporation, the remaining assets of NPCC after payment of debts shall be distributed in the manner determined by the Board, provided that (i) no part of the assets shall be distributed to any Director, and (ii) the distribution of assets shall be consistent with the requirements of Section 501(c)(6) of the United States Internal Revenue Code of 1986, as amended.

**ARTICLE XIX - AMENDMENT OF BYLAWS**

19.1 **Amendment of Bylaws.** These Bylaws may be modified, amended or repealed by an affirmative vote of two-thirds (2/3) of the Members entitled to vote at a meeting at which quorum is present, or by electronic voting in accordance with Section 8.5. Written notice of the subject matter of the proposed changes to the Bylaws shall be provided, as appropriate, to the Members no less than fourteen (14) nor more than sixty (60) days prior to the date of the meeting of the Members at which the vote is to be taken. Any modification, amendment or repeal of these Bylaws shall be subject to any application requirements for filing with or approval by NERC and FERC and other applicable governmental authority.
ARTICLE XX - EFFECTIVE DATE

20.1 Effective Date. These Bylaws shall take effect on [_______], 2011.
SCHEDULE A – MEMBERS OF NPCC

[to be attached]
1. **Selection of Director Candidates**

   In selecting candidates to serve as Stakeholder Directors and Independent Directors on the NPCC Board of Directors ("Board"), NPCC’s Corporate Governance and Nominating Committee ("CGNC") will endeavor to find individuals of high integrity who have a solid record of accomplishment in their chosen fields and who display the independence of mind and strength of character to effectively represent the best interests of NPCC. Candidates will be selected for their ability to exercise good judgment, and to provide practical insights and diverse perspectives. Consistent with its charter, the CGNC is responsible for screening director candidates, establishing criteria for nominees, and recommending a slate of nominees to the Board for consideration. The slate of director nominees will be presented to the Members for approval at the Annual Meeting of Members.

2. **Criteria for Board Service**

   The CGNC will consider and recruit candidates for director nominees based upon recommendations from Members, current directors, NPCC management, outside consultants or search firms engaged for the purpose, and any other source recommended by the Board. All candidates recommended will be evaluated for nomination based on the criteria set forth below:

   - **(a)** Stakeholder Directors must reflect the geographic diversity of the NPCC Region, which comprises the State of New York, the six New England States of the United States, and the Canadian Provinces of Ontario, Québec, New Brunswick and Nova Scotia.
   - **(b)** Directors must possess corporate and business experience at the senior-executive level, or the equivalent thereof.
   - **(c)** Each Stakeholder Director must be an officer or senior executive-level employee of a Member of NPCC.
   - **(d)** Each Independent Director must be an individual who:
     - **(i)** is not an officer or employee of NPCC;
     - **(ii)** is not an officer, director or employee of a Member;
     - **(iii)** is not an officer, director or employee of any entity that would reasonably be perceived as having a direct financial interest in the outcome of Board decisions; and
     - **(iv)** does not have a relationship that would interfere with the exercise of independent judgment in performing the responsibilities of a director of NPCC.
   - **(e)** Directors must have no actual or potential conflicts of interests that would or could interfere with the diligent performance of the responsibilities of a Board member in the best interests of NPCC.
**Matrix: Proposed Revisions to Draft Amended and Restated Bylaws of NPCC**

<table>
<thead>
<tr>
<th>Bylaw Provision</th>
<th>Proposed Changes to Bylaw Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 1 – Definitions</td>
<td>The listing of defined terms used in the Bylaws has been moved from Article 3 to this Article 1.</td>
</tr>
<tr>
<td>Section 2.1 – Offices</td>
<td>The section describing NPCC’s office has been moved from Article 1 to Section 2.1.</td>
</tr>
<tr>
<td>Section 3.1 – Not-for-Profit Corporation Status</td>
<td>This section is a new provision that describes NPCC’s status as a New York not-for-profit corporation organized under the Not-for-Profit Corporation Law of the State of New York.</td>
</tr>
<tr>
<td>Section 3.2 – Purpose of NPCC</td>
<td>The reference to &quot;statutory activities&quot; has been changed to <em>Regional Entity activities</em>, and the reference to &quot;non-statutory activities&quot; has been changed to <em>Criteria Services activities</em>.</td>
</tr>
<tr>
<td>Sections 3.2, 4.2, 4.4, 9.1 and 9.3 – Bulk Power System Definition</td>
<td>These sections have been revised to use the defined term “Bulk Power System”, where applicable, or to reference a Member's &quot;generation and transmission facilities on which faults or disturbances can have a significant adverse impact outside of the local area, as identified utilizing a reliability impact-based methodology.&quot; For purposes of the Bylaws, <em>Bulk Power System</em> has the meaning in the United States set forth in Section 215 of the Federal Power Act, as amended (16 U.S.C. § 824n), and such meaning in Canada as is consistent with applicable Provincial regulatory and/or governmental authority determinations.</td>
</tr>
<tr>
<td>Section 4.2(1) – General Membership</td>
<td>This section has been revised to state that General Members <em>which are also registered entities within the NPCC Region</em> are subject to compliance with reliability standards, <em>consistent with their registration</em>.</td>
</tr>
<tr>
<td>Section 4.2(2) – Full Membership</td>
<td>This section has been revised to clarify that Full Members are subject to compliance with regionally-specific <em>more stringent reliability criteria for their generation and transmission facilities on which faults or disturbances can have a significant adverse impact outside of the local area and which are identified utilizing a reliability impact-based methodology</em>.</td>
</tr>
<tr>
<td>Section 4.4(b) – Member Representatives</td>
<td>This section has been revised to make clear that NPCC must provide <em>written notification</em> to Members who have been removed from the NPCC roster of Members.</td>
</tr>
<tr>
<td>Section 4.4 – Voting</td>
<td>This section has been revised to reflect the 7 stakeholder voting sectors in which Members are eligible to vote: (1) Transmission Owners; (2) Reliability Coordinators; (3) Transmission Dependent Utilities, Distribution Companies and Load-Serving Entities; (4) Generator Owners; (5) Marketers, Brokers and Aggregators; (6) State and Provincial and/or Governmental Authorities; and (7) Sub-Regional Reliability Councils, <em>Customers</em>, Other Regional Entities and Interested Entities.</td>
</tr>
<tr>
<td>Section 4.5 – Assignment to Voting Sector</td>
<td>This section has been revised to state that (i) Members will be assigned to one of the 7 stakeholder voting sectors; (ii) if there are multiple memberships of separate business functions of an entity, then each business function may designate its own representative and alternate, provided that no representative or alternate can represent more than one...</td>
</tr>
<tr>
<td>Bylaw Provision</td>
<td>Proposed Changes to Bylaw Provisions</td>
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</tr>
<tr>
<td><strong>Section 5.2 – Board of Directors</strong></td>
<td>This section has been revised to state that the business and affairs of NPCC shall be managed under the direction of the Board.</td>
</tr>
<tr>
<td><strong>Section 5.4 – President and CEO</strong></td>
<td>This section has been revised to state that the Board will define the authority and responsibilities of the President and CEO.</td>
</tr>
<tr>
<td><strong>Section 5.5(a) – Vice-Chair and Officer Vacancies</strong></td>
<td>This section has been revised to show that (i) if there is a vacancy in the office of the Co-Vice Chair, Secretary or Treasurer, the Board Chair may designate a person from one of the stakeholder voting sectors to fill this vacancy, and (ii) if there is a vacancy in the office of the Secretary or Treasurer, the Board Chair may designate a person from outside of NPCC; in each case with the approval of a majority vote of the Directors.</td>
</tr>
<tr>
<td><strong>Section 5.5(b) – Board Chair Vacancy</strong></td>
<td>This section has been revised to show that (i) if there is a vacancy in the office of Board Chair in the period between Annual Meetings of Members, the Board may fill the vacancy by a 2/3 affirmative majority of the weighted sector votes and (ii) the authority and responsibility of the Board Chair will be defined by the Board and set forth in a separate agreement approved by the Board.</td>
</tr>
<tr>
<td><strong>Section 5.6 – NPCC Activities</strong></td>
<td>This section has been revised to state that &quot;NPCC engages in (i) Regional Entity activities which are conducted by its Regional Entity division, and (ii) Criteria Services activities which are conducted by its Criteria Services division.&quot;</td>
</tr>
<tr>
<td><strong>Section 6.1(a) – Composition of Hybrid Board</strong></td>
<td>This section has been revised to reflect the new composition of the NPCC Board: 14 Stakeholder Directors, 2 Independent Directors, an independent Board Chair and the President and CEO.</td>
</tr>
<tr>
<td><strong>Section 6.1(b) – No Voting Rights for Officers Serving on the Board</strong></td>
<td>This is a new section stating that the President and CEO, while serving on the Board, would not be entitled to vote on any Board matters.</td>
</tr>
<tr>
<td><strong>Section 6.1(c) – Designation of Co-Vice Chairs</strong></td>
<td>This is a new section stating that (i) 2 Co-Vice Chairs from different voting sectors on the Board would be selected by the Directors and approved by a vote of the entire membership, (ii) in the temporary absence of the Board Chair, a Vice Chair designated by a 2/3 vote of the Directors would perform the duties of the Board Chair and (iii) the Co-Vice Chairs would retain the voting rights that they otherwise held by virtue of serving as a Director.</td>
</tr>
<tr>
<td><strong>Section 6.2(a) Term and Compensation of Stakeholder Directors</strong></td>
<td>This section has been revised to show that Stakeholder Directors will be elected for a term of 2 years and their terms will be staggered. This section also makes clear that there will be no term limits and no compensation for Stakeholder Directors.</td>
</tr>
<tr>
<td><strong>Section 6.2(b) Term and Compensation of Independent Directors</strong></td>
<td>This is a new section stating that (i) Independent Directors will be elected for a term of 2 years, (ii) they may serve up to 3 terms for a maximum of 6 years and (iii) they are entitled to receive compensation as the Board may from time to time determine in its sole discretion.</td>
</tr>
<tr>
<td>Bylaw Provision</td>
<td>Proposed Changes to Bylaw Provisions</td>
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</tr>
<tr>
<td>Section 6.2(c) Term and Compensation of Board Chair</td>
<td>This is a new section stating that (i) the Board Chair will have a term of 2 years, (ii) there will be no limitations on the number of terms served by the Board Chair and (iii) compensation arrangements for the Board Chair will be reflected in a separate written agreement approved by the Board.</td>
</tr>
<tr>
<td>Section 6.3(a) – Power and Duties</td>
<td>This section has been revised to clarify that the Board has authority to approve amendments to the Regional Delegation Agreement (in addition to the RDA itself); and to oversee the assessment and enforcement of mandatory compliance with Reliability Standards consistent with the Regional Delegation Agreement and agreements with Canadian Provincial regulatory and/or governmental authorities.</td>
</tr>
<tr>
<td>Section 6.4 – Board Composition</td>
<td>This section has been revised to show that the Board will consist of an independent Board Chair, the President and CEO, such officers as shall from time to time be determined by the Board, and Directors in 8 voting sectors, with a maximum of 2 directors in each of the following sector: (1) Transmission Owners (with no more than 1 Director per Balancing Authority Area); (2) Reliability Coordinators; (3) Transmission Dependent Utilities, Distribution Companies and Load-Serving Entities; (4) Generator Owners; (5) Marketers, Brokers and Aggregators; (6) State and Provincial and/or Governmental Authorities; (7) Sub-Regional Reliability Councils, Customers, Other Regional Entities and Interested Entities; and (8) Independent Directors.</td>
</tr>
<tr>
<td>Section 6.5(a) – Quorum and Voting Requirements for the Board</td>
<td>This section has been revised to show that (i) at least one-half of the Stakeholder Directors in each of at least 60% of the stakeholder sectors and at least 1 Independent Director would constitute quorum; and (ii) the Board Chair is entitled to cast one vote during any meeting at which a quorum is present to prevent any deadlock.</td>
</tr>
<tr>
<td>Section 6.7(a) – Election of Stakeholder Directors</td>
<td>This section has been revised to show that (i) Stakeholder Director candidates will be selected in accordance with Schedule B – Rules of Procedure (Selection of NPCC Directors), (ii) Stakeholder Directors will be elected by a vote of the majority of Members in the respective stakeholder sector, (iii) no stakeholder sector can elect more than 2 Stakeholder Directors in each sector; and (iv) no Member or Affiliate of a Member may designate more than 1 Stakeholder Director to represent such Member or Affiliate.</td>
</tr>
<tr>
<td>Section 6.7(b) – Directors Nominees of Members</td>
<td>This is a new section that states that &quot;Individual Members may nominate an Independent Director candidate by petition. Each petition shall present only one Independent Director candidate meeting the requirements in the Rules of Procedure set forth in Schedule B. Petitions shall be received by the Corporate Governance and Nominating Committee on a date set by the committee. The names on the petition shall reflect at least ten percent (10%) of the Members of NPCC as of January 1 of the year in which the election is to be held. Upon receipt of a valid petition, the Corporate Governance and Nominating Committee shall add the petitioned candidate's name to the slate of director nominees to be presented to the Members for approval at the Annual Meeting of Members.&quot;</td>
</tr>
<tr>
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</tr>
<tr>
<td>Section 6.7(c) – Election of Independent Directors</td>
<td>This is a new section that reflects the following: (i) Independent Directors shall be nominated in accordance with Schedule B – Rules of Procedure (Selection of NPCC Directors) and recommended by the Board to the Members for consideration and approval; (ii) in order to contribute to the effective functioning of the Board and NPCC, Independent Directors will be drawn from diverse backgrounds and will possess a broad range of industry expertise, perspectives, experiences, skill sets and knowledge; (iii) an individual is eligible to serve as an Independent Director if the individual (a) is not an officer or employee of NPCC, (b) is not an officer, director or employee of a Member, (c) is not an officer, director or employee of any entity that would reasonably be perceived as having a direct financial interest in the outcome of Board decisions, and (d) does not have a relationship that would interfere with the exercise of independent judgment in performing the responsibilities of a director; and (iv) Independent Directors will be elected by an affirmative vote of the majority of Members present at a meeting where quorum exists.</td>
</tr>
<tr>
<td>Section 6.7(d) – Removal of Stakeholder Directors</td>
<td>This section has been revised to clarify that Stakeholder Directors may be removed for cause by at least 2/3 of the Members in their respective sector at a regular meeting of the Members or at a special meeting called for that purpose, provided that there is a quorum of that sector’s Members present at that meeting; and provided, further, that there is a quorum of not less than a majority present at the meeting of Directors at which such action is recommended.</td>
</tr>
<tr>
<td>Section 6.7(e) – Removal of Independent Directors</td>
<td>This is a new section stating that Independent Directors may be removed for cause by the affirmative vote of at least 2/3 of the Directors present at a meeting called for that purpose, provided that there is a quorum of not less than 10 Directors present at the meeting of Directors at which such action is taken.</td>
</tr>
<tr>
<td>Section 6.7(f) – Removal of Directors For Cause</td>
<td>This is a new section stating that (i) grounds for removal of Stakeholder Directors and Independent Directors “for cause” include, but are not limited to, failure to adequately perform Board duties or committee responsibilities, a felony conviction, misappropriation of funds, mental incapacity, and misconduct; and (ii) an action to procure a judgment removing any Director for cause may be brought by the Attorney-General of the State of New York.</td>
</tr>
<tr>
<td>Section 7.4 – Hearing Body</td>
<td>This is a new section stating that the Hearing Body will conduct all compliance proceedings in accordance with the hearing procedures set forth in the NERC Hearing Procedure. Hearing Body has been defined in the Bylaws as a group comprising the Hearing Officer and 2 Independent Directors (excluding the Board Chair) which has been authorized by NPCC to conduct and render decisions in a formal compliance hearing of any entity registered in the NERC compliance registry who is the subject of a notice of alleged violation, proposed penalty or sanction, contested mitigation plan or contested remedial action directive. Hearing Officer has been defined in the Bylaws as an individual employed or contracted by NPCC and designated by NPCC to preside over formal compliance hearings.</td>
</tr>
<tr>
<td>Section 8.1 – Quorum and Voting Requirements for Meetings of Members</td>
<td>This section has been revised to show that attendance in person or by proxy by one-half of the Members in each of at least 60% of the stakeholder voting sectors on the roster of Members maintained by NPCC would constitute a quorum.</td>
</tr>
<tr>
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<tr>
<td>Section 8.5 – Electronic Voting</td>
<td>This section has been revised to state that in the event quorum has not been achieved for purposes of an electronic vote, NPCC may continue to solicit electronic ballots, including abstentions, to obtain quorum and resolve the matter.</td>
</tr>
<tr>
<td>Section 9.1(1)(c) – Members’ Rights</td>
<td>This sub-clause has been revised to clarify that Members have the right to vote to amend the Bylaws in accordance with Section 19.1 (this is a new section that describes the voting requirements for amendments to the Bylaws – see below).</td>
</tr>
<tr>
<td>Section 9.1(1)(e)</td>
<td>This sub-clause has been revised to clarify that Full Members have the right to vote to establish, modify or eliminate NPCC's regionally-specific more stringent reliability criteria.</td>
</tr>
<tr>
<td>Section 9.1(2)(b) – Members’ Obligations</td>
<td>This sub-clause has been revised to clarify that each Member acknowledges its responsibility to plan and design its bulk power system and conduct its operations, consistent with its registration.</td>
</tr>
<tr>
<td>Section 9.1(2)(d)(iii) – Members’ Obligations</td>
<td>This sub-clause has been revised to change &quot;regionally-specific reliability criteria&quot; to regionally-specific more stringent reliability criteria.</td>
</tr>
<tr>
<td>Section 9.3 – Procedures for Enforcing Compliance</td>
<td>This section has been revised to clarify that (i) NPCC compliance staff determines, and the President and CEO verifies, whether a user, owner or operator of the Bulk Power System has violated a reliability standard; (ii) NPCC enforces compliance for such violation pursuant to procedures and processes specified in the NERC Compliance Monitoring and Enforcement Program; and (iii) NPCC will file with FERC or other applicable Canadian Provincial regulatory and/or governmental authorities notice of the sanction and the record of the proceedings in which the violation and sanction were determined.</td>
</tr>
<tr>
<td>Section 11.1 – NPCC Meetings</td>
<td>This section has been revised to clarify that notices for meetings of the Members must be provided at least one week prior to the meeting, except for Members’ meetings to amend the Bylaws, which has a different notice period specified in Section 19.1.</td>
</tr>
<tr>
<td>Section 11.2 – Proxies</td>
<td>This section has been revised to clarify that Members, Directors and committee members may appoint a proxy, consistent with NPCC's proxy procedures, to vote or otherwise act for such Member, Director or committee at any meeting.</td>
</tr>
<tr>
<td>Section 11.3 – Action by Remote Communication</td>
<td>This is a new section stating that a meeting among the Members or the Board by means of a communication through which the participants may simultaneously hear each other during the conference would constitute a meeting of the Members or the Board, as the case may be, if the same notice is given of the conference as would be required for a meeting and if the number of persons participating in such conference would constitute a quorum.</td>
</tr>
<tr>
<td>Section 12.3 – Criteria Services Budget</td>
<td>This section has been revised to clarify that each Full Member will be notified of the annual administrative expense budget for the Criteria Services division, on or about December 1 of the preceding year.</td>
</tr>
<tr>
<td>Section 13.1 – Funding Sources</td>
<td>This section has been revised to change &quot;non-statutory criteria services&quot; to Criteria Services division.</td>
</tr>
<tr>
<td>Section 14.1 – Termination</td>
<td>This section has been revised to change &quot;non-statutory expenses&quot; to Criteria Services division expenses.</td>
</tr>
<tr>
<td>Bylaw Provision</td>
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</tr>
<tr>
<td>Section 14.2 – Cessation of Criteria Services Division Reliability Activities</td>
<td>This section has been revised to change &quot;non-statutory criteria services&quot; to <em>Criteria Services division reliability activities</em>.</td>
</tr>
<tr>
<td>Section 16.3 – Binding Nature</td>
<td>This section has been revised to provide a placeholder for the date on which the Amended and Restated Bylaws will be adopted by the Members.</td>
</tr>
<tr>
<td>Section 17.1 – Contracts</td>
<td>This is a new section stating that the Board may authorize, by resolution, any officer or officers, or agent or agents of NPCC, in addition to the officers already authorized by the Bylaws, to enter into any contract or execute and deliver any instrument in the name of and on behalf of NPCC, and such authority may be general or confined to specific instances.</td>
</tr>
<tr>
<td>Section 17.2 – Checks, Drafts or Orders</td>
<td>This is a new section stating that (i) all checks, drafts or orders for the payment of money, notes or other evidences of indebtedness issued in the name of NPCC must be signed by the officer or officers, or agent or agents of NPCC determined by resolution of the Board and (ii) in the absence of such determination by the Board, these instruments would be signed by the President and CEO.</td>
</tr>
<tr>
<td>Section 17.3 – Deposits</td>
<td>This is a new section stating that all funds of NPCC will be deposited to the credit of NPCC in such banks, trust companies or other depositories as the Board may select.</td>
</tr>
<tr>
<td>Section 18.1 – Dissolution</td>
<td>This is a new section stating that upon the dissolution of NPCC, in accordance with paragraph EIGHTH of NPCC’s Certificate of Incorporation, as amended, the remaining assets of NPCC after payment of debts would be distributed in the manner determined by the Board, provided that (i) no part of the assets can be distributed to any Director, and (ii) the distribution of assets must be consistent with the requirements of Section 501(c)(6) of the United States Internal Revenue Code of 1986, as amended.</td>
</tr>
<tr>
<td>Section 19.1 – Amendment of Bylaws</td>
<td>This is a new section stating that (i) the Bylaws may be modified, amended or repealed by an affirmative vote of 2/3 of the Members entitled to vote at a meeting at which quorum is present or by electronic voting in accordance with Section 8.5, (ii) written notice of the subject matter of the proposed changes to the Bylaws must be provided, as appropriate, to the Members no less than 14 nor more than 60 days prior to the date of the meeting of the Members at which the vote is to be taken, and (iii) any modification, amendment or repeal of the Bylaws must be subject to any application requirements for filing with or approval by NERC and FERC and other applicable governmental authority.</td>
</tr>
<tr>
<td>Section 20.1 – Effective Date</td>
<td>This is a new section providing for the effective date of the Bylaws.</td>
</tr>
<tr>
<td>Schedule B – Rules of Procedure (Selection of NPCC Directors)</td>
<td>This is a new schedule to the Bylaws that describes the criteria for identifying and nominating Stakeholder Director candidates and Independent Director candidates.</td>
</tr>
</tbody>
</table>
Proposed Revisions to NPCC’s Board Structure

Presentation to Members of Northeast Power Coordinating Council, Inc.

March 23, 2011

Andrianne S. Payson, Esq.
Partner
Proposed Revisions to NPCC’s Board Structure: Agenda

- Rationale for Change

- Summary of Proposed Changes
  - Enhanced Hybrid Board
  - Quorum and Voting Requirements for Board meetings
  - Election of Stakeholder Directors
  - Election of Independent Directors
  - Criteria for Board Service
  - Removal of Directors
  - Independent Board Chair
  - NPCC Hearing Body

- Approvals and Timeline
“Independent Director” Representation on NPCC Board

- Corporate governance best practice in the industry
  - NERC has a fully independent Board of Trustees
  - Other Regional Entities (e.g., WECC, ReliabilityFirst) have hybrid boards with independent director classes
- Facilitates an “independent” review of compliance disputes
  - Conflict-of-interest issues may arise if NPCC stakeholder directors participate in compliance proceedings involving Members
- Corporate governance best practice in the not-for-profit sector
  - Inspired by Sarbanes-Oxley reforms for public companies, the appointment of independent directors on a not-for-profit board is often viewed as evidence that the board has the ability to make independent decisions in the best interests of the organization
  - Revised IRS Form 990 (Annual Information Return for Not-for-Profits) focuses on director independence and new definition of independent director
Proposed Revisions: *Enhanced Hybrid Board*

**Hybrid Board Structure**

- **14 Stakeholder Directors**
  - currently, up to 24 directors from eight stakeholder sectors may serve on the Board
  - reduce eight stakeholder sectors to *seven stakeholder sectors* by merging Sector 6 (*Customers*) with and into Sector 8 (*Sub-Regional Reliability Councils, Other Regional Entities and Interested Entities*)
  - reduce the number of directors in each sector from three to *two directors*

- **2 Independent Directors**
  - no independent directors currently serve on the Board
  - add a *new independent director sector* to the Board

- **Independent Board Chair**
  - Board is currently chaired by an independent chairman with no voting rights
  - grant independent Board Chair a *casting vote to resolve deadlocks*

- **Officers - - President and CEO, and others as deemed appropriate**
  - officers are not entitled to vote on Board matters
Proposed Revisions: *Quorum and Voting Requirements*

- **Quorum for Board Meetings**
  - At least 1/2 of the Stakeholder Directors in each of at least 60% of the stakeholder sectors
  - At least 1 Independent Director

- **Board Action**
  - Requires approval by 2/3 majority of weighted sector votes with each director casting 1 vote within the applicable sector
  - Board Chair may cast 1 vote to prevent any deadlock in voting
Proposed Revisions: Election of Stakeholder Directors

- Election of Stakeholder Directors
  - Elected by majority of Members in the respective stakeholder sector:
    - Sector 1 Transmission Owners (maximum of 2 directors)
    - Sector 2 Reliability Coordinators (maximum of 2 directors)
    - Sector 3 Transmission Dependent Utilities, Distribution Companies and Load-Serving Entities (maximum of 2 directors)
    - Sector 4 Generator Owners (maximum of 2 directors)
    - Sector 5 Marketers, Brokers and Aggregators (maximum of 2 directors)
    - Sector 6 Regulators (maximum of 2 directors)
    - Sector 7 Sub-Regional Reliability Councils, Customers, Other Regional Entities and Interested Entities (maximum of 2 directors)
      
      but no Member or any affiliate of a Member may designate more than 1 Stakeholder Director to represent such Member or affiliate

  - May serve multiple terms of office
  - Not entitled to compensation
Proposed Revisions: *Election of Independent Directors*

**Election of Independent Directors**

- Elected by a majority of Members present at the Annual Meeting of Members
- Drawn from diverse backgrounds
- Possess a broad range of industry expertise, perspectives, experiences, skill sets and knowledge
- Satisfy the “independence” requirements established by the Board and its Corporate Governance and Nominating Committee (CGNC)
- Serve a two-year term
  - up to three terms for a maximum of six years
- Entitled to compensation as determined in the sole discretion of the Board of Directors
Proposed Revisions: Criteria for Board Service

- CNGC will consider director candidates recommended by
  - Members
  - current Directors
  - NPCC management
  - outside consultants/search firms

- Independent Director candidates nominated by at least 10% of the Members (via a signed petition) and meeting the CGNC’s requirements will be included in the slate of nominees

- CGNC will screen director candidates and recommend a slate of nominees to the Board for consideration based on certain criteria
  - Stakeholder Directors must reflect the geographic diversity of the NPCC Region
    - State of New York
    - New England States - Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut
    - Canadian Provinces - Ontario, Québec, New Brunswick and Nova Scotia
Proposed Revisions: *Criteria for Board Service*

**cont’d**

- Directors must possess corporate and business experience at the senior executive level, or the equivalent thereof
- Each Stakeholder Director must be an officer or senior executive-level employee of a Member of NPCC
- Each Independent Director must be an individual who:
  - is not an officer or employee of NPCC
  - is not an officer, director or employee of a Member
  - is not an officer, director or employee of any entity that would reasonably be perceived as having a direct financial interest in the outcome of Board decisions
  - does not have a relationship that would interfere with the exercise of independent judgment in performing the responsibilities of a director of NPCC
- Directors must have no actual or potential conflicts of interests that would or could interfere with the diligent performance of the responsibilities of a Board member in the best interests of NPCC
Summary of Proposed Revisions: *Removal of Directors*

- **Stakeholder Directors may be removed** *for cause*
  - by at least 2/3 of the Members in their respective sector at a regular meeting of the Members or a special meeting called for that purpose
  - a quorum of that sector’s Members must be present at the meeting
  - a quorum of not less than a majority of Directors must be present at the meeting where such action is recommended

- **Independent Directors may be removed** *for cause*
  - by at least 2/3 of the Directors at a meeting called that purpose
  - a quorum of not less than 10 Directors must be present at the meeting

- **Grounds for removal** *for cause* include, but are not limited to
  - failure to adequately perform Board duties and committee responsibilities
  - felony conviction
  - misappropriation of funds
  - mental incapacity
  - misconduct

- **Attorney General of the State of New York State** has authority to file an action seeking a judgment to remove any director *for cause*
Summary of Proposed Revisions: *Independent Board Chair*

- **Board Chair**
  - Serves a two-year term
    - with no limitations on the number of terms
  - Receives compensation -- amount determined by the Board of Directors
  - Executes an independent consultant agreement with NPCC that is subject to Board approval
  - Excluded from serving on the NPCC Hearing Body
Summary of Proposed Revisions: **NPCC Hearing Body**

- **Purpose of NPCC’s Hearing Body**
  - to conduct and render decisions in a formal compliance hearing of any entity registered in the NERC compliance registry who is the subject of a notice of alleged violation, proposed penalty or sanction, contested mitigation plan or contested remedial action directive
  - to conduct all compliance hearings in accordance with the hearing procedures set forth in the NERC Hearing Procedure

- **Hearing Body shall comprise**
  - 2 Independent Directors (excluding the Board Chair), *plus*
  - a Hearing Officer (*i.e.*, an individual employed or contracted by NPCC and designated by NPCC to preside over formal compliance hearings)
Summary of Proposed Revisions: Approvals and Timeline

- **February/Early March** - Board met to review draft Amended and Restated Bylaws of NPCC reflecting the proposed hybrid board structure, and summary chart of proposed bylaw changes.

- **March 15** - Board teleconference held – unanimous recommendation to Membership of final draft Amended and Restated Bylaws of NPCC and summary matrix of proposed bylaw changes for presentation to *Members via webinar to be conducted 3/23/11*

- **March 15** - Draft Amended and Restated Bylaws of NPCC and summary matrix of proposed bylaw changes sent to Members for consideration (4 weeks).

- **Tuesday, April 12** - Members to approve the Amended and Restated Bylaws of NPCC via electronic voting, and authorize filing with NERC and FERC for approvals.

- **Mid-April** - Draft Amended and Restated Bylaws of NPCC to be sent to NERC Board of Trustees for approval early May, 2011.

- **May to Early-November** - Draft Amended and Restated Bylaws of NPCC to be approved by NERC and submitted to FERC subsequently for approval.

- **Mid-November** - Stakeholder Director nominees and Independent Director nominees to be presented by NPCC Board of Directors to Membership for approval.

- **November 30** - Members to approve slate of Stakeholder Director nominees and Independent Director nominees during 2011 Annual Meeting of Members.
April 15, 2011

To: NPCC Full and General Member Representatives and Alternates

From: Edward A. Schwerdt, NPCC President and CEO

Subject: Approval by Membership of revisions to Amended and Restated Bylaws of NPCC For Subsequent Consideration and Approval by the NERC Board of Trustees

Ladies and Gentlemen:

Let me take this opportunity to thank each of NPCC’s Members for their engagement and responsiveness over the past month’s balloting period regarding recommendations to revise the current Amended and Restated Bylaws of NPCC, to be effective January 1, 2012. Members’ consideration and over 99% approval, with a quorum in all Sectors, of the revisions to the existing NPCC stakeholder corporate governance model, as developed through the Corporate Governance and Nominating Committee, and unanimously endorsed by the NPCC Board of Directors, were efficient, timely and much appreciated.

The Memberships’ approval has been communicated to NERC’s General Counsel to facilitate inclusion of the Amended and Restated Bylaws of NPCC as an agenda action item to be presented by NPCC for consideration by the NERC Board of Trustees at its upcoming meeting in early May, 2011. A summary of the new hybrid board structure will be provided to the NERC Board, consistent with the webinar materials that were distributed and presented last month to the NPCC Membership. Following action by NERC, the revised Amended and Restated Bylaws of NPCC will be submitted to the U.S. Federal Energy Regulatory Commission for approval, and will be transmitted to applicable Canadian Provincial regulatory and/or governmental authorities as appropriate.

NPCC’s over 45 year commitment to assuring international bulk power system reliability within Northeastern North America remains consistent, even as the organizational structure evolves to meet emerging challenges and to address expanding expectations in the areas of standards development, reliability assessment, compliance monitoring and enforcement. With your continued support and collaborative efforts, NPCC is strategically positioned to provide reliability leadership within the industry well into the future.
NPCC’s comments are offered below:

There seems to be a functional separation between the NIST activities and the NERC Reliability Standards activities. NERC and NIST coordinated development of communication standards and inter-operatability is required in order to prevent applying insufficient protection to communications to critical assets and too much protection to other non-critical assets. The development of any standards need to be better coordinated and focused on the important things.

NERC needs to take on a more active NIST role with anything related to BES reliability even if it may not "seem" to directly affect reliability. This could be accomplished by having NERC liaisons participating on NIST teams and a NIST representatives on NERC teams. Coordination between NIST, DOE, DOD or anyone else contemplating developing a standard that may affect the reliability or security of the BES is needed to ensure NERC and the stakeholders have awareness, and input into the developmental process.

Thanks for the opportunity to comment.

Phil
Don't have a lot more.

This topic was part of the last two CIPCs (see my notes). Between those two meetings, NERC announced some joint collaboration between NERC, DOE and NIST, which was repeated at the March meeting. At the December meeting, Gerry Cauley felt that it was the industry’s best interest for NERC to lead the way in crafting the various industry cyber-security “standards” (guidelines?) otherwise in five years, we’ll be looking back at a balkanized mess wishing that we had done something.

My impression is that only some NERC staff like Mark Weatherford (NERC CSO) are handling these communications with NIST and DOE. Have not seen/heard of outreach on this. Let me know if I need to dig

Phil,

The only comment I would offer to the below, is that there still seems to be a functional separation between the NIST activities and the NERC Reliability Standards activities. Until such time as NERC and NIST can find a way to coordinate development of communication standards and interoperability we may be applying insufficient protection to communications to critical assets and too much protection to other non-critical assets. The development of any standards need to be better coordinated and focused on the important things. In my view, the NIST standards are too “siloed” and I am not even aware of how one could participate in this process if we wanted to. NERC needs to take on a more active role with anything related to BES reliability even if it may not “seem” to directly affect reliability. Perhaps liaisons from NERC participating on NIST teams and a NIST representative on our teams? Perhaps NERC needs a Manager of Standards Coordination to do work with NIST, DOE, DOD or anyone contemplating developing a standard that may affect the reliability or security of the BES. This individual could track and ascertain what level of support and coordination may be required by NERC during the development of these non-ERO standards and ensure NERC and the stakeholders have awareness, and input into the developmental process.

Thanks,

Guy

Guy V. Zito
Assistant Vice President-Standards
Northeast Power Coordinating Council, Inc.
1040 Avenue of the Americas, 10th Floor
New York, NY 10018
212-840-1070
212-302-2782 fax

FYI – Please forward any comments to me by COB March 29, 2011, in order to consolidate and meet the March 31st request for comments.

Thanks,

Phil
NERC’s Directional Topics to FERC’s Request for Comment on Smart Grid Interoperability Standards

Dear Planning, Operating, and Critical Infrastructure Protection Committee Members,

On January 31, 2011, the United States Federal Energy Regulatory Commission (FERC) staff held a technical conference to obtain further information to aid FERC’s determination on whether there is sufficient consensus that certain United States National Institutes of Standards and Technology (NIST) smart grid interoperability standards are ready for consideration by FERC. NERC has posted a draft letter to the Planning, Operating, and Critical Infrastructure Protection Committees identifying three areas to FERC’s request, to which it intends to provide comments (http://www.nerc.com/docs/pc/NERC_Comments_FERC_SG_v2.doc). In this letter, NERC provides directional reliability considerations and seeks input from the Planning, Operating, and Critical Infrastructure Protection Committee members regarding the content of this response.

In addition to the Operating, Planning, and Critical Infrastructure Committees, NERC is seeking detailed input from the Smart Grid Task Force (SGTF) chairs. Before filing, NERC staff’s draft comments will be sent for final consideration.

Please submit your comments to assessments@nerc.net by March 31, 2011.

Please contact Eric Rollison (eric.rollison@nerc.net) with questions.

Chrissy Vegso
North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com
chrissy.vegso@nerc.net
NPCC Board of Directors

Dear Directors,

Attached for your review and comments are the Draft for Comment minutes of the NPCC Board of Directors meeting that was held via teleconference on March 15, 2011. Please provide any comments by Wednesday, April 13, 2011 for inclusion in a subsequent Draft for Approval which will be considered during the May 3, 2011 meeting of the Board of Directors which will be held via teleconference beginning at 10 a.m.

Sincerely,

Ed Schwerdt
The Chairman called to order a duly noticed meeting of the Board of Directors ("Board") of Northeast Power Coordinating Council, Inc. ("NPCC") held by teleconference on March 15, 2011, at 10:00 a.m. A quorum was declared present during the meeting by the President and CEO, Edward Schwerdt. Andrianne Payson acted as Recording Secretary. The meeting announcement, agenda and list of attendees are attached as Exhibits A, B, and C, respectively.

**NPCC Antitrust Compliance Guidelines**
The Chairman recommended that a reading of the NPCC Antitrust Compliance Guidelines that were distributed via email with the Board agenda package and reviewed by Directors upon commencement of the meeting be waived. A motion to waive the reading of the NPCC Antitrust Compliance Guidelines was duly made, seconded and unanimously approved.

**Amended and Restated NPCC Bylaws**
Ms. Payson discussed the proposed changes to NPCC's Amended and Restated Bylaws by reviewing the revised matrix summarizing the changes to various Bylaw provisions and the revised Rules of Procedure for Electing Directors, both of which incorporated prior comments from Board members. There was a brief discussion regarding the "Member Access" clause that was proposed by Mr. Whyte and whether the director candidates petitioned by at least ten percent (10%) of the Members (i) should be limited to independent director candidates and (ii) should satisfy all of the requirements in the Rules of Procedure or solely the independence requirements. The Board agreed that the "Member Access" clause would apply to independent director candidates only, and that these candidates must satisfy both the independence requirements and general competency requirements outlined in the revised Rules of Procedure. A motion to adopt the resolutions approving the NPCC Amended and Restated Bylaws in substantially the form presented to the Board and recommending that the Bylaws be distributed to the Members for approval was unanimously approved by the Directors in each active Sector of the Board.

The President and CEO then informed the Board that he would circulate a ballot package to the Members containing a mark-up of the Bylaws showing changes to the Bylaws adopted in July 2007, the matrix summarizing the proposed Bylaw changes and the slide presentation providing an overview of the changes to NPCC's governance structure. He noted that a webinar had been scheduled for NPCC Member information and dialogue for March 23, 2011 from 11:00 a.m. to 12:00 noon and that Ms. Payson would present the proposed Bylaw changes to the Full and General Members, and that Members would have until mid-April to cast their electronic ballots approving the Bylaw changes.

**NPCC 2011 Corporate Goals (as approved by electronic ballot)**
The President and CEO then presented NPCC's Approved 2011 Corporate Goals. He noted that the 2011 corporate goals had been approved by Board electronic ballot.

**Other Matters**
The President and CEO noted that Mr. Haake remains a member of the Board of Directors until his departure from Dynegy in April 2011, and explained that the minutes of the February 8th Board meeting
would be revised to reflect that Mr. Haake's last in-person meeting was on February 8th. The President and CEO then informed the Board that there were two recent Board resignations. He noted that Mr. McCracken had left the employ of National Grid and had submitted a letter to NPCC indicating that due to his departure he was resigning from the Board and the committees on which he served effective March 3, 2011. The President and CEO then noted that Ms. Courville had also resigned from the Board and the committees on which she served effective March 16, 2011 due to her new appointment as President of Hydro-Québec Distribution. The President and CEO explained the importance of re-staffing Board committees, particularly the Corporate Governance and Nominating Committee which had lost two directors following the departures of Mr. McCracken and Ms. Courville. He indicated that he planned to work closely with the Board Chair and Mr. Barrett on this matter in the near term. Mr. Mertens requested that Resolutions of Appreciation be prepared for both Mr. McCracken and Ms. Courville for their efforts and contributions to the Board. A motion directing the President and CEO to prepare Resolutions of Appreciation for Mr. McCracken and Ms. Courville was duly made, seconded and approved by a majority of the Directors.

Future Meetings
The President and CEO presented the schedule of Board meetings for the remainder of calendar year 2011, which was distributed via email with the Board agenda package.

Adjournment
There being no further business, the Chairman adjourned the meeting of the NPCC Board of Directors at 10:45 a.m.

Approved by Board action on ______________, 2011.

Submitted by,

______________________
Andrianne S. Payson
NPCC Secretary
list of attendees
march 15, 2011

present:    harvey j. reed, chairman
            edward a. schwerdt, president and ceo
            jennifer budd mattiello, vice president and coo
            andrianne s. payson, esq., secretary

            and the following stakeholder members of the board of directors:

sector 1 (tos)    william g. longhi, orange & rockland utilities
                 isabelle courville, hydro-québec transénergie (via proxy to the president)

sector 2 (rcs)    peter brandien, iso new england, inc.
                 bruce b. campbell, independent electricity system operator
                 rick gonzales, new york independent system operator, inc. (via proxy to
                 president)

sector 3 (tdus, dcsh lses)    michael penstone, hydro one

sector 4 (gos)    glenn d. haake, dynegy
                 andrew barrett, ontario power generation, inc.

sector 5 (marketers,
brokers and aggregators)    glen mccartney, constellation energy commodities group, inc.
                             daniel whyte, brookfield power generation

sector 6 (customers)    –

sector 7 (regulatory)    hans mertens, vermont department of public service
                          tammy mitchell, nys department of public service

sector 8 (others)    michael forte, new york state reliability council, llc

     guest    wes yeoman, new york independent system operator

     absent    matthew j. picardi, shell energy na
1. Introductions/Quorum/Antitrust Compliance Guidelines  
2. President’s Report  
3. Report by the Treasurer  
   a) Finance and Audit Committee Activities  
   b) Annual Independent Audit of Financial Statements  
4. Consideration of draft NPCC Board of Directors Minutes  
   a) February 8, 2011 Meeting  
   b) March 15, 2011 Bylaws Teleconference Meeting  
5. Membership and Committee Changes  
   a) Membership Category and Sector Designations  
   b) RSC, CC, RCC, PIC Membership  
   c) Committee Reports and Corporate Goals Scorecard (written reports only)  
6. Administrative Matters  
   a) 2011 Management Salary Bandwidths  
   b) Management Development and Compensation Committee  
      Updated Variable Incentive Program  
   c) Revised NPCC Regional Delegation Agreement  
7. Summer 2011 Reliability Assessment  
   a) Operating Security Analyses and Probabilistic Assessment  
8. Regulatory Matters  
   a) NPCC Status Report on BES Definition  
   b) Follow-up to FERC Commissioner Comments on Japanese Disaster  
   c) Regie/NPCC/NERC Compliance Agreements  
9. NERC Member Representatives Committee and Board of Trustees  
   – May 10-11, 2011 Agenda to be distributed by NERC at the end of April  
   a) 2012-2015 Common Assumptions for NERC and RE Business Planning  
   b) Preliminary NERC 2012 Business Plan and Budget  
   c) NPCC BOD Policy Input
10. Organizational Matters
   a) Preliminary 2012 NPCC Budget

11. 2011 Board of Director Meeting Dates

- Thursday, June 30, 2011 – NPCC Offices (10 a.m. – 3 p.m.)
- Thursday, July 28, 2011 – Teleconference (10 a.m. – 12 noon)
- Tuesday, September 20, 2011 – NPCC Offices (10 a.m. – 3 p.m.)
- Wednesday, October 26, 2011 – Teleconference (10 a.m. – 1 p.m.)
- Wednesday, November 30, 2011 – Toronto, Ontario (7:30 a.m. – 10 a.m.)
Northeast Power Coordinating Council, Inc. (NPCC)

Chairman: Harvey J. Reed
President and CEO: Edward A. Schwerdt
Chief Operating Officer: Jennifer Budd Mattiello
Secretary: Andrianne S. Payson, Esq.
Treasurer: Christopher Weir, CPA

DIRECTORS

SECTOR 1 - TOs
William G. Longhi (O&R)

SECTOR 2 - RCs
Peter Brandien (ISO-NE)
Bruce B. Campbell (IESO)
Rick Gonzales (NYISO)

SECTOR 3 – TDUs, Dist., LSEs
Michael Penstone (Hydro One)

SECTOR 4 – GOs
Andrew Barrett (OPG)

SECTOR 5 - Marketers
Glen McCartney (CECG)
Matthew J. Picardi (Shell Energy NA)
Daniel Whyte (Brookfield)

SECTOR 7 - Regulatory
Hans Mertens (VT DPS)
Tammy Mitchell (NYS DPS)

SECTOR 8 - Others
Michael Forte (NYSRC)
Northeast Power Coordinating Council, Inc. (NPCC)

Antitrust Compliance Guidelines

It is NPCC’s policy and practice to obey the antitrust laws and to avoid all conduct that unreasonably restrains competition. The antitrust laws make it important that meeting participants avoid discussion of topics that could result in charges of anti-competitive behavior, including: restraint of trade and conspiracies to monopolize, unfair or deceptive business acts or practices, price discrimination, division of markets, allocation of production, imposition of boycotts, exclusive dealing arrangements, and any other activity that unreasonably restrains competition.

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

Participants in NPCC activities (including those participating in its committees, task forces and subgroups) should refrain from discussing the following throughout any meeting or during any breaks (including NPCC meetings, conference calls and informal discussions):

- Industry-related topics considered sensitive or market intelligence in nature that are outside of their committee’s scope or assignment, or the published agenda for the meeting;
- Their company’s prices for products or services, or prices charged by their competitors;
- Costs, discounts, terms of sale, profit margins or anything else that might affect prices;
- The resale prices their customers should charge for products they sell them;
- Allocating markets, customers, territories or products with their competitors;
- Limiting production;
- Whether or not to deal with any company; and
- Any competitively sensitive information concerning their company or a competitor.

Any decisions or actions by NPCC as a result of such meetings will only be taken in the interest of promoting and maintaining the reliability and adequacy of the bulk power system.

Any NPCC meeting participant or employee who is uncertain about the legal ramifications of a particular course of conduct or who has doubts or concerns about whether NPCC’s antitrust compliance policy is implicated in any situation should call NPCC’s Secretary, Andrianne S. Payson at 212-259-8218.
President’s Report

May 3, 2011
Board of Directors Meeting
Report Items:

- Facility Ratings Guideline
- ALR/BES Task Force
- Draft #1 2012 NERC Business Plan and Budget
Report by the Treasurer

May 3, 2011
Board of Directors Meeting
Report Items:

- Finance and Audit Committee Activities
- PWC Independent Audit Report for 2010
The Chairman called to order a duly noticed meeting of the Board of Directors ("Board") of Northeast Power Coordinating Council, Inc. ("NPCC") held on February 8, 2011, at 8:30 a.m. A quorum was declared present during the meeting by the President and CEO, Edward Schwerdt. Andrianne Payson acted as Recording Secretary. The meeting announcement, agenda and list of attendees are attached as Exhibits A, B, and C, respectively.

NPCC Antitrust Guidelines
The Chairman recommended that a reading of the NPCC Antitrust Guidelines that was distributed via email with the Board agenda package and reviewed by directors upon commencement of the meeting be waived. A motion to waive the reading of the NPCC Antitrust Guidelines was duly made, seconded and unanimously approved.

Minutes
The President and CEO presented for approval a draft of the minutes of the Board meeting held on December 1, 2010, which incorporated all comments received. Following discussion, the Board agreed that the NERC Matters section of the minutes should be further revised to increase clarification. A motion to approve the minutes, as revised, of the NPCC Board of Directors meeting held on December 1, 2010 was duly made, seconded and unanimously approved by the Directors in each active Sector of the Board.

President’s Report
The President and CEO indicated that the Board's Strategy Meeting yesterday afternoon (February 7) and earlier this morning were worthwhile and that as part of his report to the Board, he would highlight the key issues facing NPCC for 2011 and beyond.

- During the process of implementing the initiative associated with the development of risk-based standards, it became apparent that there was a lack of common understanding between industry and the regulators as to (i) whether the reliability objective of risk-based standards was to prevent cascading or prevent loss of load, and (ii) what constitutes an adequate level of international, interconnected bulk power system reliability that appropriately balances costs and benefits to consumers. The President and CEO explained that achieving consensus on these fundamental concepts, including their applicability to cyber-security related reliability issues, was essential to the development of standards with clear performance expectations and accountabilities. He further noted that successful efforts to revise the Bulk Electric System (BES) definition and to establish consistent and technically justifiable criteria for BES definition exceptions would be critical to focusing reliability efforts in the future.

- On a procedural level, it will be a challenge adapting NPCC's processes to NERC's "evolving" process for developing reliability standards in order to continue providing Northeast leadership. The President and CEO emphasized the importance of maintaining NPCC's leadership role in the standards development process.
Within the *Compliance Monitoring and Enforcement Program*, NERC and the Regional Entities intend to introduce a more risk-based approach to compliance monitoring by considering risk and materiality in the depth and rigor of audits, as well as a streamlined administrative citation process for enforcing minor violations. The President and CEO explained that this approach would increase the focus on the entities and types of violations that pose the greatest risks to reliability of the bulk power system.

In connection with the implementation of the revised Regional Delegation Agreement, the Regional Entities are working with NERC to build the "ERO One Enterprise" model with the objectives of enhancing reliability and improving efficiency and effectiveness in working with registered entities. The President and CEO noted that NERC and Regional Entity leaders attended a collaborative planning meeting in mid-January to prepare an initial draft of ERO-wide strategic goals through 2015. He explained that these draft goals would be reviewed at the February 16th NERC Member Representatives Committee meeting, and that the Board's "help me, help you" message to NERC management would be delivered.

In connection with the development of NERC and Regional Entity 2012 Business Plans and Budgets, NERC's Chief Accounting Officer recently released a preliminary draft of common business planning assumptions that would be reviewed by NERC and the Regional Entities at upcoming meetings next week. The President and CEO noted that the purpose of establishing consistent planning goals and assumptions was to promote an enterprise-wide outlook for reliability related activities performed by NERC and the Regional Entities.

The President and CEO indicated that he would distribute copies of his remarks to the Board shortly after meetings going forward.

**Membership Category and Sector Designations**

The President and CEO stated that a Board vote would be required for the sector designations of Maine Public Service Company (General Member) and Groton Electric Light (Full Member), both in Sector 3 (*Transmission Dependent Utilities, Distribution Companies and Load-Serving Entities*); and Penobscot Energy Recovery Company (Full Member), in Sector 4 (*Generator Owners*). The President and CEO also noted, without the requirement for a vote, a change in the designation of the Alternate Member Representative for First Wind.

A motion to approve the sector designations of Maine Public Service Company (General Member) in Sector 3 (*Transmission Dependent Utilities, Distribution Companies and Load-Serving Entities*), Groton Electric Light (Full Member) in Sector 3 (*Transmission Dependent Utilities, Distribution Companies and Load-Serving Entities*), and Penobscot Energy Recovery Company (Full Member) in Sector 4 (*Generator Owners*) was duly made, seconded and unanimously approved by the Directors in each active Sector of the Board.

**Committee Membership Changes**

The President and CEO informed the Board that there were several changes to NPCC's operating committees:

- **Reliability Coordinating Committee** – Sector 1 (*Transmission Owners*): (1) Michael Paris to serve as the New York Power Authority alternate, replacing Gerald LaRose who recently retired; and (2) Michael Schiavone to serve as the National Grid representative, replacing Dana Walters. Mr. Fedora also noted that the RCC's Nominating Committee was currently seeking a new co-Vice Chair for the RCC.

- **Compliance Committee** – Sector 1 (*Transmission Owners*): Michael Bilheimer to serve as the United Illuminating Company alternate.
Regional Standards Committee – Sector 1 (Transmission Owners): Ben Wu to serve as the Orange and Rockland Utilities representative.

Regional Standards Committee – Sector 2 (Reliability Coordinators): Donald Weaver to serve as the New Brunswick System Operator representative, replacing Randy MacDonald.

A motion to approve these committee changes was duly made, seconded and unanimously approved by the Directors in each active Sector of the Board.

NPCC Committee Reports

Regional Standards Committee (RSC) – Mr. Zito presented the RSC report to the Board, which included a discussion of the following: (1) there is a draft ballot had been conducted underway for the draft Underfrequency Load Shedding (UFLS) Regional Standard, but quorum had not yet been obtained and the RSC was remanding the standard back to the UFLS drafting team for further work and clarification; (2) the RSC is currently reviewing processes to ensure that it can react quickly and more efficiently to any new standards requirements issued by NERC and FERC; and (3) the RSC is currently developing a filing for Directories for Nova Scotia and is preparing to do the same for New York State Public Service Commission. In response to questions from the Board regarding NPCC’s review of NERC’s Compliance Application Notice (CANs) postings for comment, Mr. Buffamante clarified that NERC’s CANs are used by compliance auditors to provide guidance while assessing an entity’s compliance with reliability standards. He noted that NPCC faced the challenge of ensuring that CANs do not change or expand standards’ requirements.

Mr. Zito then presented the Draft 2011 RSC Work Plan, which reflected significant increases in resources that would be required to (i) develop standards, including 36 projects of continent-wide standards identified in the NERC Reliability Standards Development Plan: 2011-2013; (ii) coordinate NPCC’s participation in the revision of CIP standards; and (3) assist the Compliance Committee through the development of more auditable requirements in the Phase 2 of the Directories project. Board members then suggested that (i) the RSC Work Plan should include an analysis of cost effectiveness of proposed NPCC Regional Standards to convey the seriousness of this issue for NPCC, (ii) the RSC reach out to the Reliability Coordinating Committee for assistance with a cost effectiveness process, and, as an option, that NPCC’s Governmental/Regulatory Affairs Advisory Group consider advocating for adding an analysis of cost effectiveness as part of the NERC standards development process, and (iii) the RSC recommend consolidation of NERC standards projects, where appropriate. A motion to approve the 2011 RSC Work Plan as revised was duly made, seconded and unanimously approved by the Directors in each active Sector of the Board.

Reliability Coordinating Committee (RCC) – Mr. Fedora presented the RCC report to the Board, which included information on the following: (1) the approval of NPCC’s long-range adequacy overview; (2) endorsement of the NPCC Criteria Compliance and Enforcement Program; and (3) the RCC’s intent to coordinate the significant increase in written requests for data from NERC. The Board then discussed (i) the potential for coordinating reliability metrics data requests from NERC with information developed by the Northeast ISOs, (ii) the possible development of a report reflecting the data assembled to date; and (iii) the process for transitioning all NPCC criteria (“A”, “B”, and “C” Documents) into auditable requirements, as appropriate, in Regional Reliability Directories by the end of 2011.

Mr. Fedora then presented the Draft 2011 RCC Work Plan. A motion to approve the 2011 RCC Work Plan was duly made, seconded and unanimously approved by the Directors in each active Sector of the Board.

Compliance Committee (CC) – Mr. Kopman presented the CC report to the Board, which included information on the following: (1) approval of the Registered Entity Culture of Compliance Survey, its initial distribution to 25 entities and the upcoming webinar on February 16, 2011 to introduce the survey and answer questions; (2) ongoing review of the Compliance Registry; and (3) the issuance of 116 compliance violation notices in 2010 (compared with 45 in 2009) and (4) the submission to NERC of mitigation plans associated with these violations (none of which have been rejected by NERC).
Mr. Buffamante then presented the 2011 Compliance Audit Program, which reflects 21 on-site audits scheduled for 2011, 11 on-site CIP audits, 21 off-site CIP audits and 98 off-site audits (of which two are in progress). He informed the Board that NPCC had received and accepted 423 Technical Feasibility Exception (TFE) submissions to date and that 329 submissions had their Part B substantive assessments completed and approved. He noted that NPCC is on schedule to complete assessments of the remaining submissions within a one year period.

Mr. Penstone commended Mr. Kopman and the CC for providing the Board with the CMEP metrics table, which he found helpful in facilitating the Board's review and evaluation of the CC's work.

Mr. Kopman then presented the Draft 2011 CC Work Plan, which reflected the development of more comprehensive performance related to expediting the enforcement process. A motion to approve the 2011 CC Work Plan was duly made, seconded and unanimously approved by the Directors in each active Sector of the Board.

**MDCC Recommendations**

The Board Chair reported that the Management Development and Compensation Committee (MDCC) met on January 20, 2011 to discuss the 2010 Corporate Goal Attainment Report and the 2010 President and CEO Incentive Compensation Award. He stated that the MDCC determined that NPCC had met its 2010 corporate goals and that NPCC's performance with respect to its Regional Entity Division and Criteria Services Division was higher than "Meets Target" with a composite score of 93.2%. Board members did not have any questions for the President and CEO or the Vice President and COO in connection with the 2010 Corporate Goal Attainment Report. However, Mr. Longhi requested that, in the future, a "scorecard" (similar to the CMEP metrics table) be prepared to show measurement of the corporate goals.

The President and CEO and the Vice President and COO then left the meeting. The Board Chair discussed the process by which the MDCC evaluated the overall performance of the President and CEO for 2010, which included a review of the 2010 Exceptional Achievements summary prepared by the President and CEO and supporting detail for each achievement, as well as the solicitation of feedback from Board members. The Board Chair then distributed copies of draft resolutions with recommendations from the MDCC for Board approval.

A motion to approve the implementation of a 2010 Variable Incentive Program releasing incentive awards to the NPCC staff, to be accrued to the salaries subaccount for 2010 for distribution in early March 2011, was duly made, seconded and approved by a majority of the Directors. Directors Hans Mertens and Tammy Mitchell in Sector 7 abstained from voting on this motion.

A motion to approve the implementation of a 2010 Variable Incentive Program releasing an incentive award to the President and CEO, to be accrued to the salaries subaccount for 2010 for distribution to the President and CEO in early March 2011, was duly made, seconded and approved by a majority of the Directors. Directors Hans Mertens and Tammy Mitchell in Sector 7 abstained from voting on this motion.

The President and CEO and the Vice President and COO then returned to the meeting.

**NPCC 2011 Corporate Goals**

The President and CEO presented NPCC's Proposed 2011 Corporate Goals to the Board for discussion. In response to questions from the Board, the President and CEO noted the following: (1) the "attainment of Bulk Power System revisions" would be included in Goal #6a; (2) following the issuance of the NERC mid-year report listing certain reliability metrics discussed in Mr. Fedora's RCC Report, there would be a review of a few key areas for follow-up action; (3) the "stretch" goal for Goal #6a would be revised to reflect FERC approval of a BES filing that contains key provisions that are important to NPCC; (4) the corporate goals would be reviewed generally and revised, as appropriate, to ensure that the development of any draft document is not listed as a "stretch" goal; and (5) each NPCC operating committee should be tasked to
develop its own "scorecard" so the Board can assess the committee work being completed, and scorecards should show separate goals relating to improving the efficiency of NPCC as an organization.

The Board Chair reminded Board members that comments on NPCC's Proposed 2011 Corporate Goals were due on February 18, 2011.

Organizational Matters

CGNC Activities – Ms. Courville briefly explained the activities of the CGNC in connection with the proposed changes to NPCC's governance structure. She then asked Ms. Payson to review the proposed changes to NPCC's Amended and Restated Bylaws that are intended to reflect the new governance structure.

Proposed Bylaw Changes; Rules of Procedure for Electing Directors – Ms. Payson discussed the proposed changes to NPCC's Amended and Restated Bylaws by reviewing the matrix summarizing the revisions to various Bylaw provisions and the Rules of Procedure for Electing Directors. The Board provided several comments to the Bylaws and the Rules of Procedure, which Ms. Payson agreed to revise. The Board discussed the proposed timeline for approval of the Amended and Restated Bylaws and agreed to send a complete package of materials to Members containing the mark-up of the Bylaws, the matrix summarizing the Bylaw changes and the slide presentation providing an overview of the changes to NPCC's governance structure immediately following the next Board meeting.

Presentation to Members of NPCC Governance Changes – The President and CEO reminded Board members that a draft slide presentation to Members providing an overview of the governance structure changes was discussed during the Board Strategy Meeting on February 7, 2011.

Report by the Treasurer

Mr. Weir reported to the Board consistent with the unaudited Statement of Activities for both the Regional Entity and Criteria Services divisions for the period from January 1, 2010 through December 31, 2010 which had been provided to the NPCC members and Board of Directors in later January by NPCC’s Vice President and COO. Additionally, the Treasurer informed the Board that the independent auditors, PricewaterhouseCoopers LLP (PwC), would likely have a draft of NPCC's audited financial statements for 2010 prepared by the end of February. He reminded the Board that an unaudited Statement of Activities for 2010 for the Regional Entity Division was required by NERC as are regular quarterly reports and had been previously circulated. The Treasurer indicated that NPCC's total expenditures were under budget by nearly $1.8 million for the year. He then asked the Vice President and COO to provide an overview of NPCC's year end results for 2010.

The Vice President and COO provided the Board with a breakdown of 2010 funding and comparative expenditure amounts for the total ERO Enterprise (i.e., NERC and the eight Regional Entities). On an enterprise basis combined funding was nearly$165 million with a variance of more than $10 million. She explained that the overall variance as a percentage of total budgeted funding was under budget by 6.1%. She noted that WECC was under budget by less than 1%, NERC by 6%, FRCC by 18%, SPP by 22% and NPCC under by approximately 11.6%. She further noted that total funding was largely on target with the exception of WECC where grant funding was $14 million under budget. She then explained that (i) NERC's total funding was over budget by more than $800,000 due to increases in fees for system operator tests, certificate renewals and continuing education provider fees, (ii) NERC and all of the Regional Entities were under budget except for MRO which had added staff to manage processing Technical Feasibility Exceptions, (iii) staff for the total ERO enterprise was approximately 98% by year end; (iv) meeting expenses on an ERO wide basis were under budget by 24% compared with NPCC which was under budget by 22% (under budget variances ranged from 8% to 44% for this expense); and (v) operating expenses on an ERO wide basis were under budget by 26% or approximately $13.7 million, compared with NPCC's under budget of 14% due mainly to lower fees and expenses for consultants, professional services and legal
fees. She noted that NPCC's Criteria Services Division, similar to the Regional Entity Division, was also under budget by 42% or $463,240 for 2010.

The Vice President and COO informed the Directors that a NERC teleconference for its Finance and Audit Committee was being held tomorrow (February 9) where concerns would likely be expressed as to whether a Regional Entity's under spending could be viewed as underperformance of that entity's Regional Delegation Agreement (RDA) and that while expenditures were under budget NPCC would indicate that all requirements under the RDA were met during 2010.

**Regulatory Matters**

Mr. Fedora provided an update of revisions to the BES definition. He noted that the first meeting of the BES standard drafting team would be held on February 9-11, 2011 and that he would circulate unofficial summary notes to the Board within one week after drafting team meetings.

**NERC Matters**

The Board Chair noted that the meetings of the NERC Member Representatives Committee and the NERC Board of Trustees were scheduled for February 16 and 17, 2011, respectively. The President and CEO explained that Board policy input was requested for four items: (1) ERO Enterprise Strategic Direction, (2) Bulk Electric System Definition-Policy Issues and Questions, (3) Priorities for Addressing Risks to Reliability and (4) Alerts and the Alerts Process. Following Board discussion, the President and CEO agreed to revise the draft Board Policy Input to clarify certain comments and to include recommendations for (i) any proposed implementation strategy for the BES definition to include an adequate transition period incorporating cost-effective modifications into the schedules for system modifications and (ii) the expansion of Issue #6 *Integration of New Technologies* to reflect a working partnership among manufacturers, providers and public policy makers in order to achieve the desired reliable integration.

A motion to approve the draft Board Policy Input, subject to revisions by the President and CEO, was duly made, seconded and unanimously approved by the Directors in each active Sector of the Board.

**Administrative Matters**

The Board Chair reminded Board members that all Directors needed to execute the Annual Code of Conduct Implementation Agreement.

**Other Matters**

Mr. Haake informed the Board that he would be leaving Dynegy at the beginning of April 2011 and this would be his last in person Board meeting. The President and CEO then informed the Board that Mr. Janega had changed roles within Nova Scotia and planned to resign from the Board shortly. Mr. Mertens requested that *Resolutions of Appreciation* be prepared for both Mr. Haake and Mr. Janega for their efforts and contributions to the Board. A motion directing the President and CEO to prepare *Resolutions of Appreciation* for Mr. Haake and Mr. Janega was duly made, seconded and approved by a majority of the Directors. Mr. Haake abstained from voting on this motion.

**Future Meetings**

The President and CEO presented the schedule of Board meetings for the remainder of calendar year 2011, which was distributed via email with the Board agenda package.

**Adjournment**

There being no further business, the Chairman adjourned the meeting of the NPCC Board of Directors at 12:40 p.m.
Approved by Board action on _____________, 2011.

Submitted by,

____________________
Andrianne S. Payson
NPCC Secretary
EXHIBIT C
LIST OF ATTENDEES
February 8, 2011

Present: Harvey J. Reed, Chairman
Edward A. Schwerdt, President and CEO
Jennifer Budd Mattiello, Vice President and COO
Christopher Weir, CPA, Treasurer
Andrianne S. Payson, Esq., Secretary

And the following members of the Board of Directors:

Sector 1 (TOs) William G. Longhi, Orange & Rockland Utilities
Isabelle Courville, Hydro-Québec TransÉnergie (by teleconference)

Sector 2 (RCs) Peter Brandien, ISO New England, Inc.
Bruce B. Campbell, Independent Electricity System Operator
Rick Gonzales, New York Independent System Operator, Inc. (via proxy to President)

Sector 3 (TDUs, DCs, LSEs) Douglas McCracken, National Grid
Michael Penstone, Hydro One

Sector 4 (GOS) Glenn D. Haake, Dynegy
Andrew Barrett, Ontario Power Generation, Inc.
Rick Janega, Nova Scotia Power Inc. (via proxy to President)

Sector 5 (Marketers, Brokers and Aggregators) Glen McCartney, Constellation Energy Commodities Group, Inc.
Matthew J. Picardi, Shell Energy NA (via proxy to President)
Daniel Whyte, Brookfield Power Generation

Sector 6 (Customers) –

Sector 7 (Regulatory) Hans Mertens, Vermont Department of Public Service
Tammy Mitchell, NYS Department of Public Service

Sector 8 (Others) Michael Forte, New York State Reliability Council, LLC

Guests Wes Yeoman, New York Independent System Operator
Guy V. Zito, NPCC Assistant Vice President – Standards
Stanley Kopman, NPCC Assistant Vice President – Compliance Enforcement
Philip Fedora, NPCC Assistant Vice President – Reliability Services
Salvatore Buffamante, NPCC Assistant Vice President – Compliance Audits and Investigations
The Chairman called to order a duly noticed meeting of the Board of Directors ("Board") of Northeast Power Coordinating Council, Inc. ("NPCC") held by teleconference on March 15, 2011, at 10:00 a.m. A quorum was declared present during the meeting by the President and CEO, Edward Schwerdt. Andrianne Payson acted as Recording Secretary. The meeting announcement, agenda and list of attendees are attached as Exhibits A, B, and C, respectively.

**NPCC Antitrust Compliance Guidelines**
The Chairman recommended that a reading of the NPCC Antitrust Compliance Guidelines that were distributed via email with the Board agenda package and reviewed by Directors upon commencement of the meeting be waived. A motion to waive the reading of the NPCC Antitrust Compliance Guidelines was duly made, seconded and unanimously approved.

**Amended and Restated NPCC Bylaws**
Ms. Payson discussed the proposed changes to NPCC's Amended and Restated Bylaws by reviewing the revised matrix summarizing the changes to various Bylaw provisions and the revised Rules of Procedure for Electing Directors, both of which incorporated prior comments from Board members. There was a brief discussion regarding the "Member Access" clause that was proposed by Mr. Whyte and whether the director candidates petitioned by at least ten percent (10%) of the Members (1) should be limited to independent director candidates and (ii) should satisfy all of the requirements in the Rules of Procedure or solely the independence requirements. The Board agreed that the "Member Access" clause would apply to independent director candidates only, and that these candidates must satisfy both the independence requirements and general competency requirements outlined in the revised Rules of Procedure. A motion to adopt the resolutions approving the NPCC Amended and Restated Bylaws in substantially the form presented to the Board and recommending that the Bylaws be distributed to the Members for approval was unanimously approved by the Directors in each active Sector of the Board.

The President and CEO then informed the Board that he would circulate a ballot package to the Members containing a mark-up of the Bylaws showing changes to the Bylaws adopted in July 2007, the matrix summarizing the proposed Bylaw changes and the slide presentation providing an overview of the changes to NPCC's governance structure. He noted that a webinar had been scheduled for NPCC Member information and dialogue for March 23, 2011 from 11:00 a.m. to 12:00 noon and that Ms. Payson would present the proposed Bylaw changes to the Full and General Members, and that Members would have until mid-April to cast their electronic ballots approving the Bylaw changes.

**NPCC 2011 Corporate Goals (as approved by electronic ballot)**
The President and CEO then presented NPCC's Approved 2011 Corporate Goals. He noted that the 2011 corporate goals had been approved by Board electronic ballot.

**Other Matters**
The President and CEO noted that Mr. Haake remains a member of the Board of Directors until his departure from Dynegy in April 2011, and explained that the minutes of the February 8th Board meeting would be revised to reflect that Mr. Haake's last in-person meeting was on February 8th. The President and CEO then informed the Board that there were two recent Board resignations. He noted that Mr. McCracken had left the employ of National Grid and had submitted a letter to NPCC indicating that due to his departure he was resigning from the Board and the committees on which he served effective March 3, 2011. The President and CEO then noted that Ms. Courville had also resigned from the Board and the committees on which she served effective March 16, 2011 due to her new appointment as President of Hydro-Québec Distribution. The President and CEO explained the importance of re-staffing Board committees, particularly the Corporate Governance and Nominating Committee which had lost two directors following the departures of Mr. McCracken and Ms. Courville. He indicated that he planned to work closely with the Board Chair and Mr. Barrett on this matter in the near term. Mr. Mertens requested that Resolutions of Appreciation be prepared for both Mr. McCracken and Ms. Courville for their efforts and contributions to the Board. A motion directing the President and CEO to prepare Resolutions of Appreciation for Mr. McCracken and Ms. Courville was duly made, seconded and approved by a majority of the Directors.

Future Meetings
The President and CEO presented the schedule of Board meetings for the remainder of calendar year 2011, which was distributed via email with the Board agenda package.

Adjournment
There being no further business, the Chairman adjourned the meeting of the NPCC Board of Directors at 10:45 a.m.

Approved by Board action on ________________, 2011.

Submitted by,

____________________
Andrianne S. Payson
NPCC Secretary
EXHIBIT C
LIST OF ATTENDEES
March 15, 2011

Present: Harvey J. Reed, Chairman
Edward A. Schwerdt, President and CEO
Jennifer Budd Mattiello, Vice President and COO
Andrienne S. Payson, Esq., Secretary

And the following stakeholder members of the Board of Directors:

Sector 1 (TOs) William G. Longhi, Orange & Rockland Utilities
Isabelle Courville, Hydro-Québec TransÉnergie (via proxy to the President)

Sector 2 (RCs) Peter Brandien, ISO New England, Inc.
Bruce B. Campbell, Independent Electricity System Operator
Rick Gonzales, New York Independent System Operator, Inc. (via proxy to President)

Sector 3 (TDUs, DCs, LSEs) Michael Penstone, Hydro One

Sector 4 (GOs) Glenn D. Haake, Dynegy
Andrew Barrett, Ontario Power Generation, Inc.

Sector 5 (Marketers, Brokers and Aggregators) Glen McCartney, Constellation Energy Commodities Group, Inc.
Daniel Whyte, Brookfield Power Generation

Sector 6 (Customers) –

Sector 7 (Regulatory) Hans Mertens, Vermont Department of Public Service
Tammy Mitchell, NYS Department of Public Service

Sector 8 (Others) Michael Forte, New York State Reliability Council, LLC

Guest Wes Yeoman, New York Independent System Operator

Absent Matthew J. Picardi, Shell Energy NA
Northeast Power Coordinating Council, Inc.  
Confidential Information  

2011 Management Salary Structure  
(2% Increase in Bands compared to 2010 - endorsed by MDCC 4/15/11)

<table>
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<th>Corporate Layer</th>
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<th>Maximum</th>
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<td>134,600</td>
<td>249,000</td>
</tr>
</tbody>
</table>

Salary structure no longer references a midpoint as market rates can vary greatly.
RESOLUTIONS OF THE
BOARD OF DIRECTORS OF
NORTHEAST POWER COORDINATING COUNCIL, INC. ("NPCC")

Proposed 2011 Management Salary Structure

WHEREAS, the Management Development and Compensation Committee (MDCC) reviewed via teleconference meeting held April 15, 2011 the Proposed Management Salary Structure for 2011 which has additionally been provided to the NPCC Board for its consideration; and

WHEREAS, the MDCC assessed that the recommended 2% increase to the bandwidth structure for 2011 is in line with the New York metropolitan area and electricity industry management salary structure reviews and studies conducted by various consulting companies;

NOW THEREFORE, BE IT

RESOLVED, that NPCC, through its Board of Directors and upon the recommendation of the MDCC, adopts a 2011 Management Salary Structure reflecting a 2% increase in bandwidths over the 2010 Management Salary structure that was approved by the NPCC Board of Directors in April of 2010; and

FURTHER RESOLVED, that the proper officers of NPCC be, and each of them hereby is authorized and directed, on behalf of NPCC, to refer to this approved structure in the development of future budgetary projections and compensation decisions; and

FURTHER RESOLVED, that all actions taken on behalf of NPCC by any Authorized Person in furtherance of any of the foregoing resolutions be, and they hereby are, expressly authorized, ratified, confirmed, adopted and approved in all respects.

May 3, 2011

Andrianne S. Payson
Secretary
Northeast Power Coordinating Council, Inc.
2012-2015 SHARED BUSINESS PLANNING AND BUDGET ASSUMPTIONS

PURPOSE AND SCOPE

Between January and March 2011, NERC and the eight Regional Entities collaborated in the development of a common set of business planning assumptions. The results from that effort are contained in this document. These assumptions are based on the ERO goals and objectives [ERO Enterprise Strategic Direction].

The document will be used by NERC and each of the Regional Entities as an input to each organization’s 2012 business plans and budgets and longer term business and budget planning, recognizing there may be unique factors that drive differences in each organization’s final business plans and budgets subject to the approval of their respective governing bodies.

Where additional Program Area resource needs are anticipated or specific Program Area undertakings are anticipated, it is the intention that this document will also address the allocation of those resource requirements and needs between NERC and the Regional Entities, as well as identify assumptions with respect to industry resource support with respect to particular programs (e.g., standards development).

OVERVIEW OF BUSINESS ENVIRONMENT

LEGAL CONTEXT

NERC and the Regional Entities will continue to work under the regulatory framework governing the establishment and enforcement of reliability standards for the bulk electric system established by applicable governmental authorities in the United States and Canada.

NERC and the Regional Entities do not at this time anticipate substantive generic amendments to the terms of their existing delegation agreements, which will not expire during the planning period, or changes to Regional affiliations, but individual amendments may be necessitated by changes in certain Regional Entities’ rules documents. NERC and the Regional Entities, will, however, make significant strides toward implementing the ERO Enterprise model for the benefit of stakeholders. Although the scope of each Regional Entity’s delegated authorities and responsibilities will remain relatively constant and incremental process improvements and efficiency gains are expected throughout the planning period, workload associated with the
delegated authorities is expected to increase in a manner that offsets and exceeds the efficiency gains.

NERC and its Regional Entities will continue to work in a collaborative way with the North American Transmission Forum, Inc. and North American Generator Forum (collectively Forums) and anticipates the Forums will also provide public lessons learned, industry training, and opportunities for the industry to further advance reliability. Additionally, NERC and the six Regional Entities comprising the Eastern Interconnection will work in closer collaboration on reliability issues that impact the Interconnection.

**BUSINESS ENVIRONMENT**

Economic conditions will continue to place cost pressures on NERC and the Regional Entities to work as efficiently as possible and leverage overall ERO resources. Cost pressures on the electric utility industry may affect stakeholder resources available to participate in NERC and Regional Entity activities.

Since NERC and the Regional Entities business plans, budgets, and resource requirements were and will continue to be established based upon the assumption of continued industry participation in support of key program areas, including but not limited to event analysis, reliability assessments, and standards development, any significant change in the quality or availability of industry resources will increase NERC’s resource and funding requirements.

**NERC COMMITTEES**

There will be increased coordination with respect to resource and workload planning between and among NERC management and NERC’s committees, including, but not limited to the Operating Committee, Planning Committee, Critical Infrastructure Protection Committee, Standards Committee, and Compliance and Certification Committee. The coordination is expected to result in improved identification of incremental resource needs, more effective resource management, and increased efficiency in resource allocation.
RELIABILITY STANDARDS PROGRAM

1. Over the planning period, NERC will implement a results-based standards program based on a NERC Board of Trustees endorsed prioritization process with regular consideration of substantive standards developments and FERC rulings containing standards directives. The program deliverables will focus on revisions to existing reliability standards and development of new reliability standards that are expected to lead to the greatest improvement in bulk electric system reliability. Training materials will be developed, training will be provided, and the results-based approach will be applied to applicable existing and future standards projects. Additional NERC resources will be required to support this effort. At the NERC level technical personnel with training skills either in training department or within standards will be needed to assure training is available for drafting teams as their membership changes due to attrition or when new teams are created. At the Regional level resource allocation of time to receive training will be necessary, at a minimum.

2. NERC will modify the standards development process to improve speed and quality, and to explicitly address cost-effectiveness, while maintaining ANSI accreditation for those standards which qualify as ANSI standards. Examination of equivalent registration in Canada will be undertaken. The process modifications will involve the use of pilot programs in 2012 and possibly additional pilot programs in later years.

3. NERC and the Regions will address and appropriately prioritize all fill-in-the-blank standards over the planning period. NERC standards development staff is expected to provide increased coordination of regional standards development by becoming more involved earlier in the regional standard development efforts to help assure consistency in regional and continent-wide standard technical content, format, and quality. Depending on the number of regional standards, additional NERC resources beyond those currently dedicated to supporting the regional programs may be required.

4. NERC and the Regional Entities continue to expect cyber and critical asset security to be a priority in the United States and Canada, with significant oversight by applicable government authorities. CIP-002 through CIP-009 (or other applicable designation), version 4, is targeted for submittal to the NERC board and filing in 2012, with regulatory response expected in 2012 and expected implementation in 2013 at the earliest.

5. NERC and the Regional Entities will lead the development of a revised definition of adequate level of reliability (ALR) of the bulk electric system. This will be accomplished through the efforts of the NERC Member Representatives Committee, and the Operating and Planning Committees. The revised definition will be delivered to the Board of Trustee’s for consideration in February 2012.
the event the ALR revision process results in a need for standards revisions or additions, additional resources may be required at NERC, as well as from the Regional Entities and industry.

6. Assumptions with respect to highly specialized technical resource requirements associated with critical infrastructure standards development are addressed under the Critical Infrastructure Protection Program Area.

7. Assumptions regarding additional Compliance Program Area resources to support standards development are addressed under the Compliance Area.

8. A decrease in workload is expected in the later years of the planning period, after based on the results-based standards initiative and improved standards development process due to improvements in standards. The number of projects contained in the Reliability Standards Development Plan is expected to increase over the planning period as the results-based standards initiative is fully implemented, work necessary to complete the response to FERC Order 693 directives is finalized, and the existing requirement to review each standard every five years is implemented. However, the scope of these projects is generally expected to be narrower than would otherwise potentially exist in the absence of the Results-Based Standards initiative. NERC will need more expertise in the project management, technical writing disciplines in the Standard Department, along with additional standards process administrator support to manage the standards development governance and stakeholder interface. Additional analyst resources for website content are anticipated over the period to aid in fulfilling the ERO obligation to provide a comprehensive status of standards (effective dates, implementation plans) in the US and the Canadian Provincial regulatory jurisdictions.

9. NERC projects to continue its current development and regulatory filing activity level in 2012-2015 in accordance with the prioritization process of the Standards Committee. Generally, NERC will plan on a one year timeline to respond to future FERC directives on standards development while addressing the directives backlog over the next five years. This will require additional NERC resources to support regulatory coordination. No regional impacts are expected.

10. NERC projects to develop and process 12-15 substantive NERC standards related filings per year, conduct approximately 25 ballots, and provide 25 commenting rounds under the successive balloting process for standards or interpretations.

11. The Regional Entities expect to work with NERC to limit the number of Regional Standards submitted during the planning period by focusing on international solutions where possible. Less than 10 Regional Standards are expected to be submitted during the planning period.

12. Regional Standards Development processes will be periodically reviewed and updated as necessary to keep pace with similar changes with the NERC process.
This may have an impact on Regional Entity resource requirements. NERC will provide increased standard drafting team training to enable all drafting team members to understand their role in the standards development process. This added training will require additional resources at the NERC level in the near term.

13. NERC and the Regional Entities will:

- Increase communication and outreach opportunities with stakeholders and NERC standing committees;
- Increase project level communications, education, and training for new or revised standards;
- Continue to improve the standards portion of the NERC and Regional Entity Websites;
- Work with stakeholders to jointly identify needs for new or revised standards or standards products; and
- Provide the necessary information and background to allow the industry stakeholders to perform a cost effectiveness analysis.

These efforts will require additional resources to provide management oversight and accountability for these key standards interface and communication activities. At the NERC level this requires additional resources in Standards Information to support website content and regulatory coordination.

14. NERC will continue to transform its standards organization to sustain a higher level of activity, output and quality. It is anticipated that this effort will require additional Regional Entity and Industry resources and will require an increase in NERC resources including:

- Increased technical resources to support drafting teams in the development of results-based standards and associated training;
- Increased resources to support greater stakeholder outreach in the Standards information function;
- Dedicated support for standards database development and maintenance in support of the ERO compliance and standards information system; and
- Additional project management support for North American, standards development activity.
COMPLIANCE MONITORING AND ENFORCEMENT AND ORGANIZATION REGISTRATION
AND CERTIFICATION PROGRAM

1. Assumptions with respect to highly specialized technical resource requirements associated with compliance monitoring and enforcement of critical infrastructure standards are addressed under the Critical Infrastructure Protection Program Area.

2. The Technical Feasibility Exception (TFE) program will continue to require significant staffing resources within NERC and across the industry as Regional Entities perform reviews and gauge compensating measures. TFE development, review and approval will result in additional compensating measure validation checks, quarterly reporting tracking, and change management. Experiences gained through existing operations will be utilized to guide the development of resource recommendations.

3. The number of interpretation and guidance requests is assumed to remain constant in the near term. CANs, case notes and industry-trial implementation periods are expected to continue, as are formal interpretation requests.

4. Continue refinement of risk-based methodologies to support more effective and efficient compliance monitoring activities such as; appropriately focused Annual Implementation Plan and Actively Monitored List (AML), audit scoping and various enforcement activities. This refinement, while improving the reliability enhancement component of the compliance program, is not anticipated to require additional NERC, Regional Entity, or Industry resources and will be accomplished by making use of standard auditing practices.

5. NERC and the Regional Entities will coordinate development of a risk-based approach to compliance monitoring. The first step will be to develop appropriate risk profile determination for registered entities as a pilot in 2011 with further expansion throughout the planning period.

6. NERC and regional staff will continue to collaborate to define ongoing training needs, priorities and implementation schedules for NERC and Regional Entity auditors, enforcement, and investigation staff. The Regional Entities should assume that NERC will include in its budget the cost of these training programs, other than Regional Entity costs (e.g., labor, travel, and lodging) to participate and attend.

7. NERC and Regional Entity staff should be provided the time to maintain critical industry certifications, such as NERC System Operator Certification. Additionally blending in the appropriate audit and investigative skills must be provided. Budgets and long term work plans should reflect recertification and training time for NERC and Regional Entity staff.

8. NERC will conduct semi-annual three day ERO auditor workshops to provide auditors with updates on compliance policies, actions and requirements in order to
promote consistency of audit practices and procedures. Goal is to have at 100 percent of auditors, including CIP auditors as their schedules permit, attend at least one of the semianannual three day workshops which will be scheduled for the third week of February and September. The Regional Entities should assume that NERC will be responsible for the cost of these training programs, other than Regional Entity costs (e.g., labor, travel, and lodging) to attend.

9. Increase the number of spot checks over the next three years in conjunction with a risk-based approach to compliance monitoring. While this will initially increase auditor preparation time and resources, appropriately scoped audits based on entity risk and performance profiles should lead to efficiencies in the audit program. Notwithstanding these improvements in efficiency Regional Entities may be required to increase their audit resources in the near term.

10. Audits, which will continue under a schedule to complete BA, TOP, and RC audits each three years and other entities each six years in the first few years of the planning period, will transition to a periodicity more reflective of the risk profile of registered entities as the planning period progresses. Compliance monitoring will be based on a risk and performance review of the individual entity; where necessary audits will have an increase in depth and complexity, including an increased number of unscheduled audits or spot checks. While some audits will be more in-depth and of greater complexity, other audits may require less resources based on the risk and performance based assessment of each entity and all audits will become more focused and perhaps reduced in scope. Regional Entities may nevertheless find it necessary to increase their audit resources to satisfy these workload requirements. It is reasonable to expect that entities having a higher risk profile will be audited more often, while those with a lower one will be subjected to audits more infrequently.

11. Changes to the Rules of Procedures affecting the Compliance Monitoring and Enforcement Program will continue to be made as appropriate in order to enhance efficiency in compliance operations and enforcement. However, it is not possible at this time to predict the impact of these yet to be identified improvements on the need for further resource additions in the ERO compliance and enforcement areas.

12. In addition to the regular schedule of workshops and other communications, NERC and Regional Entities will also continue to collaborate and provide special industry communications, focusing on both the most-violated, as well as recently adopted, standards and those most critical to reliability. It is anticipated that additional Regional Entity resources will be needed to support this effort.

13. NERC and the Regional Entities compliance and standards program area management will work collaboratively to provide more compliance guidance to support industry’s efforts to achieve compliance prior to the effective date of new and revised standards. This increased collaboration is expected to mitigate the
need for additional resources to support compliance application notices. However additional resources are required at NERC in the near term to support dedicated compliance input to standards and conduct field testing of standards approved by the NERC BOT or approved by FERC and still in the implementation phase.

14. NERC and Regional Entities will coordinate and expand registered entity training in the application of reliability standards in order to better prepare registered entities, improve compliance and reduce the number of erroneous self reports and self-certifications. NERC’s and the Regional Entities’ compliance program area will require resource additions in 2012 to provide more input and support to facilitate standards development and forward looking guidance to assist industry in meeting compliance deadlines. These additional resources will also be used to conduct webinars of revised and new standards’ implementation plans.

15. NERC and Regional Entities will refine audit guidance for all new Reliability Standards. NERC and Regional entity compliance staffs will need to conduct semiannual workshops to improve guidance and instruction on certain standards in 2012 and 2013. Given the complexity and number of number of standards and requirements NERC will require additional resources in the near term to develop guidance and training to industry on MOD standards. These additional resources will also consider linkages between the modeling and planning standards to assist NERC and the Regional Entities in providing overall compliance guidance. Regional Entities estimate that the auditing of these standards will be accomplished with existing resources.

16. NERC and the Regional Entities estimate that, with the introduction of a robust, registered entity focused Events Analysis process, approximately 40 CI’s per year are probable and will require additional resources.

ENFORCEMENT

1. NERC and the Regional Entities will continue to establish streamlined mechanisms to expedite the disposition of minor, administrative violations and look to gain more discretion to handle minor violations before they enter the enforcement process to better focus existing resources on significant violations.

2. NERC and Regional Entity resources will be required to develop and implement an enforcement process that encourages “good” self-reporting, one that results from a systematic compliance “culture” to detect, report, and correct problems, obtains adequate recognition in the enforcement processes.

3. Utilizing existing resources, follow-up to NERC’s education of the industry on lessons learned from violations that pose the most risk to the bulk electric system with “targeted aggressive enforcement” for further instances of non-compliance.

4. The current trend of alleged violations is expected to continue during the planning period.
5. Through efficiency gains and limited additional resources, NERC and Regions will strive to achieve a 12-month total average processing time for alleged violations over the planning period.

REGISTRATION

1. The number of registered entity functions may increase as a result of the possible expansion of the Bulk Electric System definition. However, this may be mitigated (in part) through increases in joint registration and the application of the Multi-Region Register Entity (MRRE) process, alleviating the need for resource additions.

2. It is assumed that a uniform BES definition will be implemented in 2012 and it will result in increased workload for the Regions as they deal with exclusion requests in 2012 and 2013. The program area resource impacts will vary by Regional Entity, as will the Program Area under which this work is performed.

3. NERC does not expect significant number of registration challenges, with efforts in registration focusing on refining the current registries across the Regional Entities.

4. The number of certifications of BA, RC, and TOP may increase as entities adjust footprints and responsibilities. At present no major additional resources are envisioned.

5. The number of Joint Registration Organization and Coordinated Functional Registrations will likely increase as entities better delineate shared responsibilities and seek to achieve efficiency and effectiveness through better alignment of responsibilities and compliance liabilities.

6. Over the planning period, NERC will review its registration criteria to enhance its joint and coordinated functional registration to better approximate registration by requirement or by asset.

RELIABILITY ASSESSMENT AND PERFORMANCE ANALYSIS PROGRAM

1. NERC and the Regional Entities will lead the development of a revised definition of adequate level of reliability (ALR) of the bulk electric system. This will be accomplished through the efforts of the NERC Member Representatives Committee, and the Operating and Planning Committees. The revised definition will be delivered to the Board of Trustees for consideration in February 2012. NERC will continue to incrementally refine data reporting requirements from registered entities, and review adequate level of reliability related metrics used in reliability assessments.

2. NERC and Regional Entities will gather data or complete analysis in support of U.S. Federal or Canadian Provincial initiatives. For example, the following reliability considerations are being or may be reviewed:
a. High impact/low frequency events such as geomagnetic disturbances
b. System frequency response analysis
c. Analysis of low-inertia operations of the bulk power system
d. Climate change
e. Environmental regulations
f. New technology integration such as renewable energy, smart grid, energy storage, and/or electric vehicles

3. NERC will continue to require resources to analyze TADS data and support the TADS system. NERC will also publish an annual report assessing trends once sufficient data is collected.

4. Generator Availability Data System (GADS) and Spare Equipment Database (SED) collection may become mandatory in 2012 and, together with Demand Response Availability Data System (DADS) collection which becomes mandatory in 2011, will require Regional Entity resources support, similar to the current TADS process. NERC will provide industry training regarding the mandatory submittal of SED, DADS and GADS data. Additionally, NERC staff will be required to provide both administrative and analysis support to the SED, DADS, and GADS system.

5. NERC and the Regional Entities will continue to provide independent reviews of assessments to assure a high level of technical rigor.

6. Resources in this program area will continue to provide subject matter expertise to support standards development and improvements, respond to requests for determinations of exceptions to bulk electric system, as well as support other program area technical needs.

7. Resources will be required to support the development and validation of models, mitigation strategies, studies and education related to geomagnetic disturbance events.

8. NERC will continue to develop analysis of TADS data in 2012. Additionally, NERC staff will be required to provide both administrative and analysis support to the TADS system, resulting in an annual report assessing trends once sufficient data is collected.

9. To meet NERC’s Three-Year Performance Assessment commitments, NERC will continue to:
   a. Vet proposed and future metric development, collection, and analysis with industry stakeholders through the Reliability Metrics Working Group (RMWG).
b. Identify and spotlight system and equipment trends through assessments of the availability data systems and metrics (e.g., TADS, GADS, TADS, reliability metrics, etc.)

c. Two limited focus post-seasonal overviews will be completed annually (Summer and Winter). NERC and the Regional Entities will prioritize and budget for two reliability assessment initiatives (scenario and special reliability assessments) per year. Specialized contractors may be used to complete detailed analysis to support scenario assessments. Three special assessments are currently scheduled to be completed between 2011 and 2014 (change in resource mix, gas dependency, delays in transmission development).

10. To meet NERC’s Three-Year Performance Assessment commitments, NERC may be required to add resources to:

a. Quarterly updates of metric analysis results through NERC’s website, NERC News, and via Webinars and an annual report assessing the State-of-Reliability in North America based on this analysis.

b. Develop a centralized data collection, reporting and validation process, and calculation tools in 2012 and beyond for reliability assessments, (electricity supply and demand database) metric development and availability data systems such as TADS, GADS, DADS, and SED.

i. Develop integrated database to support the collection, validation, and distribution of reliability assessment information including generation, transmission, and demand data in 2011 through 2012. NERC may need to develop information system enhancements for the Regional Entities to support automation. The requirements for any such enhancement at NERC would be developed by the RAPA Program Area, procured by the NERC’s IT department and budgeted as a RAPA Program area cost. It is anticipated that Regional Entity resources will be needed to support this effort.

ii. Support increased coordination and data collection, analysis to support tracking and data analysis to calculate associated risks to reliability identified in future NERC alerts (advisory, recommendations, and essential actions).

c. Increased coordination with event analysis, lesson learned, and model validation activities. Specialized contractors may be used to complete detailed analysis to support model data collection and validation. Resources will be required to administer and monitor data quality and model validation, as well as develop and maintain associated training materials.

d. Complete work plans supporting reliability assessment and input into NERC’s reliability standards process for technology integration and high-impact, low-frequency event risks.
i. NERC will implement probabilistic assessments into the Long-Term Reliability Assessment with a trial run in 2012. A common regional set of probabilistic reliability indices and probabilistic-based work products will be used to supplement the NERC’s Long-Term Reliability Assessment. Information system enhancements and modeling support may be required by Regional Entities to support this effort. By 2013, the Regional Entities may be required to work with stakeholders to generate suitable probabilistic indices which may include composite (generation and transmission) reliability comparisons for future year trending.

ii. Probabilistic energy and high-risk hours analysis to be included in seasonal and long-term reliability assessments to supplement capacity assessment with trials in 2013.

TRAINING, EDUCATION, AND OPERATOR CERTIFICATION PROGRAM

1. NERC and the Regional Entities will coordinate the delivery of educational materials to registered entities through NERC’s development and implementation of a centralized, robust learning management system (LMS). The LMS is expected to provide standards technical guidance, compliance guidance, lessons learned, examples of excellence, best practices, alerts, and other technical resource information. To maintain support for this system, NERC will require the addition of staff.

2. In 2012, NERC and the Regional Entities will begin to implement a compliance auditor training program that will require staff and contractor resources to implement. The priority of implementing training programs for additional technical functions (i.e., CIP Auditors, Investigators, Root Cause Analysts, Training Instructors, etc.) will be determined. NERC and the Regional Entities will continue to support core ERO function training courses (e.g., auditors, root cause analysis, CIP auditing) throughout this development.

3. NERC and the Regional Entities will place priority on developing educational materials for Registered Entities regarding expectations for new and existing reliability standards, and for supporting a culture or reliability excellence.

4. NERC will continue to provide training to NERC and Regional Entity standards development staff and drafting teams on results-based standard development.

5. In 2012, NERC will centralize the coordination and management of all internal and external training. This will include development and management of an overall budget for internal and external training and education activities for all program areas. The functional requirements for particular training and education programs will be developed by the Program Area(s) with the relevant subject matter expertise (e.g., Standards Program Area for standards training, Compliance Program Area for auditor training, Human Resources department for code of conduct training, etc.) The Training, Education, and Operator Certification
Program Area will manage and be staffed with resources necessary to support the organization, planning and execution of, and registration for, specific training activities within the parameters of the overall training and education budget, with individual program areas providing subject matters experts as required in support particular activities. The applicable portion of the overall budgets, as well as costs, associated with specific program area training (e.g., standards, compliance, etc.) will continue to be allocated and charged to those program areas (e.g., standards training costs will be reflected in the standards budget, compliance training in the compliance budget, etc.). Operator training and certification programs will continue to be organized, managed, budgeted and funded consistent with the requirements of the rules of procedure. Additional resources requirements will be needed at NERC in 2012 to implement this approach and support Program Area training activities. Notwithstanding these resource additions, the centralized management of these activities is expected to enhance overall coordination, efficiency and quality of training and education activities. The Regional Entities are planning to manage this effort within existing budgeted training resources.

6. Each Regional Entity will host a minimum of two different compliance workshops each year.

7. NERC standards and compliance staff will conduct at least one joint workshop for industry each year; focusing on inter-relationships and feedback mechanisms.

8. In the case of NERC, the incremental costs of hosting workshops and other educational activities where stakeholders attend in person will be recovered through attendance fees in most cases.

9. NERC will contract for professional training for NERC and Regional Entity staffs to improve their effectiveness, including training in facilitation, negotiation, project management, and leadership.

10. No significant changes are expected in system operator certification CEH requirements through 2013.

**SITUATION AWARENESS AND INFRASTRUCTURE SECURITY PROGRAM**

1. NERC and the Regional Entities will continue to evaluate and coordinate their differing and complementary roles in CIP and Situation Awareness for budgeting and/or operational purposes.

2. During 2011 NERC made a significant investment to support the implementation of a situation awareness tool for FERC, NERC, and Regional Entities. NERC will incur ongoing licensing, maintenance, and support services fees for SAFNR within its budget with no attendant impact on the Reliability Coordinator budgets and may seek FERC funding support. Regional Entities will be responsible for costs associated with establishing and maintaining monitoring displays.
3. NERC will fund and implement a new alerts system in 2012 that provides increased functionality to satisfy NERC’s business needs in alerts development and processing and ensure the alerts are issued to the appropriate parties.

4. During 2012, NERC will continue to undertake significant activities and funding to facilitate third party development and management of North American Phasor Concentration System (NASCON) software and regional node communication integration. Commencing in 2013, NERC anticipates a reduced need for a direct NERC funding role related to NASPI development, with any NERC funding tied to NERC’s internal situation awareness capabilities.

5. NERC will evaluate and implement steps during the 2012-14 to transfer some or all of its reliability tools and functions to third parties, including but not necessarily limited to the Interchange Distribution Calculator and [list other potentially affected tools]. One of the key challenges continues to be the development of an alternative funding mechanism with the users of the tools providing direct funding for the development, operation, and maintenance of the tools. Prior to implementation of these steps NERC will seek input from the Regional Entities, appropriate NERC committees and working groups, and other affected parties.

**CRITICAL INFRASTRUCTURE PROTECTION**

It is anticipated that major incidents, events, threats, or vulnerabilities may result in re-prioritization of CIP initiatives through 2015.

1. NERC’s Critical Infrastructure Protection Program Area will have responsibility for the identification and management of the specialized critical infrastructure protection resources needed to support overall ERO CIP goals and objectives, as well as the specialized CIP resources needs of the other program areas (e.g., Standards, Compliance, Situation Awareness)

2. NERC and the Regional Entities will face increased competition in attracting well-qualified staff to address expanding CIP challenges, particularly in cyber security.

3. CIP activities will continue to increase significantly across the electricity sector. Risk analysis, incident response, CIP compliance requirements, information sharing and intelligence, CIP standards oversight, security training and awareness, and other functions are expected to increase in NERC CIP resource requirements throughout the planning period. In light of these resources pressures, throughout the planning period, NERC and Regional Entities will need to establish strategic priorities and CIP resource allocations to support those priorities.

4. NERC will strengthen CIP partnership with U.S. and Canadian Government authorities to facilitate two-way information exchanges that enhance and expand knowledge of critical infrastructure threats and risk. NERC will promote CIP incident reporting and work with the Regional Entities to conduct security event
and incident analysis and improve security practices in conjunction with the ES-ISAC.

5. In support of the Compliance program, the Technical Feasibility Exception (TFE) program will continue to require significant staffing resources within NERC and across the industry as Regional Entities perform reviews and gauge compensating measures. TFE development, review and approval will result in additional compensating measure validation checks, quarterly reporting tracking, and change management. Experiences gained through existing operations will be utilized to guide the development of resource recommendations.

6. Staff resources necessary to effectively conduct industry-wide CIP audits will continue to be a challenge. There are too few auditors with the necessary skill and experience to monitor compliance with all CIP requirements. Active training and recruitment will be critical to success of the ERO CIP audit program.

7. The new CIP-002 V4 standard is expected to result in a substantial increase in the number of entities and critical assets required to be monitored for CIP compliance in 2012-2015.

8. NERC and the Regional Entities will develop and support a training and implementation program for registered entities to successfully implement CIP-002 V4. The training and implementation program will be based on a well developed audit plan and provide technical application guidance.

9. NERC will develop a robust ES-ISAC and Threat and Vulnerability Management Program (TVMP) with the following organic capabilities:
   a. Bi-directional sharing of sanitized information and other intelligence products with government and federal law enforcement agencies;
   b. A secure communications portal for information sharing with electricity sector stakeholders;
   c. ERO-wide visibility and situational awareness of network infrastructure to monitor for cybersecurity threats and identify ICS/EMS/SCADA control system protocols and signature vulnerabilities and provide reporting to potentially affected entities in near real time;
   d. Industry-wide awareness of emerging threats and risks;
   e. Security incident analysis and lessons-learned that enhance the electricity sector security posture.

10. More comprehensive understanding of confidential and time sensitive standards development processes is necessary. In the event of a national security emergency the NERC board may direct development of a standard in response to the emergency that is deemed confidential with information that can only be
shared on a “need to know” basis. This will require resources to develop an infrastructure capable of accommodating these obligations.

11. The Cyber Risk Preparedness Assessment (CRPA) program is designed to assess the current cyber resiliency capabilities of BPS entities and the adequacy of existing reliability mechanisms related to the highly unique nature of cyber threats. This sustaining program is a valuable resource to both NERC and industry and is expected to expand considerably through 2015 as more entities take advantage of the opportunity provided by the CRPA experience.

12. The NERC Sufficiency Review Program will be re-architected to address CIP-002 Version 4.

13. NERC will collaborate with governmental organizations including federal agencies, law enforcement, and DOE national laboratories to:
   a. Develop case studies at government determined critical facilities to further understanding regarding requirements for “flow of power.”
   b. Develop certification guidelines for the Smart Grid Cybersecurity Operator.
   c. Partner with the Industrial Control Systems Cyber Emergency Response Team (ICS-CERT) to share threat, vulnerability, and security incident information.
   d. Investigate benchmarking of vendor products and systems that improve cybersecurity protection.
   e. Develop joint security Advisory products
   f. Develop a comprehensive Cybersecurity Risk Management Process Guideline for the enterprise electricity sector
   g. Integrate security event analysis from government agencies and national laboratories.

14. The ERO will implement requirements of the ESCC Roadmap and Coordinated Action Plan in coordination with the Critical Infrastructure Protection Committee (CIPC) and industry volunteers to support the:
   a. Severe Impact Resilience Task Force (SIR TF)
   b. Cyber Attack Task Force (CA TF)
   c. Smart Grid/Cyber Security Task Force (SGCS TF)
   d. GeoMagnetic Disturbance Task Force (GMD TF)
   e. Spare Equipment Database Task Force (SED TF)
   f. NERC Crisis Response Plan

15. CIP Compliance Application Notice (CAN) guidance is expected to be provided in greater volume and with increased frequency to registered entities.
16. National level security exercises will be conducted to examine industry’s cybersecurity and physical security preparedness and response capabilities through simulation of coordinated cyber and physical attacks on industrial control system, SCADA, and information technology assets.

17. NERC will develop comprehensive cyber security training program that validates knowledge and technical competency.

**EVENTS ANALYSIS**

1. NERC and the Regional Entities will define clear, uniform criteria/ranking for reporting and categorizing of system events and security incidents.

2. NERC and the Regional Entities will work together to develop joint processes and resourcing for triage, analysis, and reporting of system events to the regulators and will coordinate with regulators regarding these issues.

3. NERC and the Regional Entities will provide timely publication of lessons learned and recommendations and track responses to recommendations.

4. NERC and the Regional Entities will refine the criteria and process to require prompt and complete self-analysis of events and disturbances to promote continuous improvement and information sharing.

5. NERC will work with the Regional Entities to develop and provide root cause analysis training for NERC, Regional Entity staffs and the industry at large and subject matter experts who participate in event analysis and investigation teams.

6. The number of events requiring review and analysis will increase, with approximately 175 of those events qualify for review per year. The heavy lifting for review of these events will be at the registered entity and Regional Entity levels – they will need to be logged and tracked and reviewed by NERC and regional staff to verify that all parts of the review are completed, including compliance reviews.

**CORPORATE SUPPORT FUNCTIONS**

1. In 2012, NERC will establish an ERO-wide risk assessment framework. This function will include internal audit capabilities with respect to NERC’s compliance with the Rule of Procedure and other legal requirements, as well as the compliance by Regional Entities with the Regional Delegation Agreement. This framework will also address the roles and responsibilities of the NERC Board of Trustees, Board committees and the various standing committees.

2. NERC and the Regional Entities will continue to work collaboratively to improve the efficiency and effectiveness of ERO processes, taking into consideration the results and recommendations of NERC’s business process improvement initiative.
3. As part of its business process initiative, NERC is conducting a detailed and structured assessment of the technology platforms that support each of the major business processes including such factors as the inventory of users, capability of the tools for supporting the existing processes, opportunities to enhance program and process efficiency, the cross-process support provided by the tools, the support provided by the tools for regional entity and other stakeholder input processes, etc. NERC will seek input and feedback from the Regional Entities as part of this initiative. The intent of this assessment is to establish a baseline view of the tools and capabilities that are available to support NERC and ERO business process needs, as well as identify the IT needs that are not being met by the existing infrastructure that could be satisfied with other tools, such as SharePoint. Taking into consideration the outputs of this initiative, NERC and the Regional Entities will collaborate to develop and implement the most effective and efficient protocols and tools for the exchange of data and information between and among the Regions and NERC while optimizing organizational efficiencies as contemplated by the delegation agreements. Funding responsibility will be addressed based on specific organizational needs taking into account agreed upon common objectives and requirements for the applicable budget year.

4. NERC and the Regional Entities will continue to make improvements to their individual and collective business planning and budgeting processes, as well as cash flow forecasting and budget management practices.

5. NERC and the Regional Entities will maximize the cost effective use of conferencing facilities for hosting ERO meetings and conferences.

6. NERC and the Regional Entities will work together to evaluate and implement, where practical, joint purchasing activities and cost control measures to reduce costs of common operating expenses.

7. NERC and the Regional Entities will continue to maintain reserves and/or lines of credit to assure adequate funding resources, including the ability to request supplemental funding, for extended, major investigations and contested proceedings. NERC and the Regional Entities should plan to have short-term and intermediate term internal means to handle funding of hearings to permit effective due process for registered entities.

8. NERC and the Regional Entities will continue to face challenges and will require resources and programs to support the hiring and retention of qualified personnel.

9. Increased support services resources may be required to facilitate and support operations requirements and achievement of objectives.
10. Technology (software and hardware) investments will be required to support accounting, human resources and communications requirements and objectives.

11. Health care premiums, liability insurance and leasehold operating costs will likely continue to increase during the planning period.
April 11, 2011

Mr. William Gallagher, Chairman
NERC Member Representatives Committee
Special Projects Chief
Transmission Access Policy Study Group
104 Hampton Meadows
Hampton, NH 03842

Re: Policy Input to NERC Board of Trustees

Dear Bill:

First, I congratulate you on running a very successful and informative first meeting of the Member Representatives Committee (MRC). The written input and discussion by the committee on the ERO enterprise strategic direction and goals, the Bulk Electric System definition, and priorities for addressing risks to reliability were very helpful to the Board of Trustees (board) in its deliberations and decision-making.

I continue to encourage MRC members and the industry sectors they represent to provide written input in advance of the May 10–11, 2011 meetings and share their views at the meeting on the key issues on the agendas of the MRC and the board. Your committee’s face-to-face discussions are very good, but having written input in advance of the meeting really helps the board members better prepare for and benefit from those discussions. To that end, I am sending this letter earlier in the meeting cycle to give committee members more time to discuss these issues with their respective sectors and develop their written comments.

I see five topics for the upcoming meetings where your input and discussion will be especially helpful to the board.

**Bulk Electric System (BES) and Adequate Level of Reliability (ALR) Definitions (MRC 5) —** The MRC and the board had a lively discussion at our February meetings on these definitions and how NERC should go about developing them. The MRC has formed a task force to discuss the policy issues and questions related to these definitions and we expect to hear a report from you on the status of that work. We will also hear from the chairs of the drafting teams working on the BES definition itself as well as the Rules of Procedure changes that will be required. The definitions of BES and ALR are fundamental to the standards NERC develops, registration of entities, and enforcement of compliance, so the board will be very interested in the direction this effort is heading.
Facility Ratings Alert Responses and Next Steps (MRC 7) — NERC’s November 30, 2010 Alert-Recommendation required transmission owners and generation owners of BES transmission facilities to review their current facility ratings methodology to verify that the methodology used to determine facility ratings is based on actual field conditions, and to submit to NERC descriptions of their plans for how and when all transmission lines will be assessed. We heard a preliminary report at the February 16, 2011 MRC meeting on the status of these responses and also that NERC and the Regional Entities expected to complete a reasonableness review of the submitted plans by April 1, 2011. The board will be interested in hearing reactions from affected stakeholders on how this process is progressing and issues or concerns they may have.

Event Analysis Process Improvements (MRC 8) — Given that one of the ERO’s strategic goals is to promote and facilitate reliability improvement through event causal analysis, the board is interested to hear discussion on the need for open sharing of technical findings from event analysis reports given the concerns regarding confidentiality, compliance enforcement, and critical energy infrastructure information protection.

NERC Metrics (MRC 9) — At the MRC’s February meeting, we heard an overview report on the state of metrics development, one element of which is the development of Regional Delegation Agreement (RDA) metrics as called for in the RDAs themselves and as identified by FERC in their comments on the Three-Year ERO Performance Assessment. The board is anxious to hear stakeholder comments on the proposed RDA metrics. In addition, the board would like to hear comments on the system reliability metrics that have been developed and are now displayed on NERC’s Reliability Dashboard.

2012 Business Plan and Budget (MRC 12) — The Board Finance and Audit Committee (FAC), along with the rest of the board, will be very interested in stakeholder reaction to the draft NERC 2012 Business Plan and Budget, which will be presented and discussed at the MRC meeting. The FAC will seek stakeholder comments during the meeting and follow up as needed in a future session.

This is a longer than normal list of issues on which the board would like to hear stakeholder input, but each issue is important in its own right.

Thank you in advance for providing written comments to Dave Nevius, MRC secretary (dave.nevius@nerc.net) by May 5, 2011 so they can be packaged and sent to the board members in advance of the meeting.

Thank you,

John Q. Anderson
NERC Board of Trustees Chairman

cc: NERC Board of Trustees
Member Representatives Committee
NPCC Board of Directors

Dear Members,

This email is being provided on behalf of NPCC’s President and CEO, Edward A. Schwerdt and serves as notice of a NPCC Board of Directors Teleconference meeting to be held on Tuesday, May 3rd from 10:00 a.m. until approximately 1:00 p.m.

Attached are an initial agenda package and a form of proxy for the May 3, 2011 teleconference. Additional agenda materials will be distributed next week in a 2nd Mailout. The NPCC Agenda Package for the Board of Directors Meeting has also been posted on the BOD FTP Secure Site. The URL address to download this agenda package is https://neptune.npcc.org/thinclient. The User ID is npccbod and the Password is BO@rd.

The dial-in information for the teleconference meeting is:

1-877-260-3999  Participant Code 6945#

Please feel free to contact me if you have any questions.

Sincerely,

Maritza Feliciano
Office Manager and Executive Assistant
Northeast Power Coordinating Council, Inc.
Tel. (212) 840-1070 Main
Tel. (212) 840-4903 Direct
Fax (212) 302-2782
mfeliciano@npcc.org
To:          NPCC Board of Directors

Subject:    May 3, 2011 Teleconference Meeting of the
            NPCC Board of Directors – 10 a.m. to 1 p.m.

Ladies/Gentlemen:

A number of actions will be considered at the May 3, 2011 Teleconference Meeting of the Northeast Power Coordinating Council, Inc. (NPCC) Board of Directors. An agenda for the meeting has been distributed via e-mail on behalf of the President and CEO with supporting materials. It is important to have your participation in this meeting.

If you are unavailable to participate telephonically, please either appoint another member of the Board of Directors to participate and vote on your behalf, or appoint the President, or Secretary as your proxy to vote at this meeting.

A proxy form is enclosed for signature by the NPCC Board of Directors Member. If you wish to utilize this proxy, please sign the attached form and fax it to the attention of the President and CEO at the corporate office in New York City at (212) 302-2782.

Thank you for your attention to this matter.

Sincerely yours,

Jennifer Budd Mattiello

Jennifer Budd Mattiello
Vice President & COO

JBM:jm
Enclosure
The undersigned, a Member of the NPCC Board of Directors, hereby appoints:

NPCC Board of Directors Designee

or, in the event the foregoing Designee is unavailable to participate in the teleconference meeting noted below, the President, Secretary or Assistant Secretary acting singly, as his/her proxy to vote on all business which may properly come before the NPCC Board of Directors meeting to be held via teleconference at 10:00 a.m. on Tuesday, May 3, 2011.

The President or Secretary, acting singly as proxy, is directed to vote at the NPCC Board of Directors Meeting:

- for ______ Minutes of the 2/8/11 Board of Directors Meeting of NPCC
- against ______

and

- for ______ Minutes of the 3/15/11 Board of Directors Bylaws Teleconference Meeting
- against ______

and

- for ______ Approval of Member Applicants’ Sector Designations
- against ______

and

- for ______ Approval of BOD Committee Membership Change(s)
- against ______

and

- for ______ Approval of NPCC 2011 Management Salary Bandwidths
- against ______

and

- for ______ Approval of Management Development and Compensation Committee Variable Incentive Program Update Recommendations
- against ______
and

for ______ Approval of Revised NPCC Regional Delegation Agreement
against ______

and

for ______ Approval of NPCC BOD Policy Input to NERC BOT 5-11-11 Meeting
against ______

NPCC Director of the Board Company Name
Critical Infrastructure

Cyber Attack Task Force Formed as Part of Coordinated Action Plan

Reliability Assessment and Performance Analysis

NERC Launches Interactive Reliability Indicators Display

NERC Workshop on Accommodating High Levels of Variable Generation

Standards

Information on How a Standards Project Undergoes Development

NERC’s Standards Process: Key Features for Industry Participants

Standard Drafting Team Vacancies

Situation Awareness

NERC Awards Situation Awareness Contract to SmartCloud

Filings

NERC Filings
Documents filed with FERC in March

Careers at NERC

NERC Seeks Talented Professionals
Cyber Attack Task Force Formed as Part of Coordinated Action Plan

As part of its Coordinated Action Plan, the North American Electric Reliability Corporation (NERC) announced that it has formed the Cyber Attack Task Force. The task force will consider the impacts of a coordinated cyber attack on the reliability of the bulk power system.

The task force will identify opportunities to enhance existing protection, resilience and recovery capabilities associated with power system operations practices, plans and procedures, as well as the tools and systems that operators rely upon to manage the reliable operation of the bulk power system. By developing flexible options, system operators will be better prepared to recognize an event and implement mitigation tactics that may include unique solutions not typical to daily operations.

The task force, which consists of more than 40 volunteers, is chaired by Mark Engels, director of Information Technology Risk Management at Dominion. Charles Abell, supervising engineer of Transmission Operations Technical Support at Ameren Corporation, will serve as vice chair. Solutions from the task force will be shared across the electric sector to be used by individual entities according to local circumstances.

“Operators are trained to spot anomalies and take the appropriate actions in real time,” Engels said. “The Cyber Attack Task Force will build on that existing knowledge with recommendations that make it easier to detect and respond to indicators of an organized attack.”

The Coordinated Action Plan was developed in response to recommendations from a June 2010 joint NERC and Department of Energy report - High Impact, Low Frequency Event Risk to the North American Bulk Power System. The report found that the best approach to these events would be through an organized combination of industry-led task forces and NERC staff initiatives.

“NERC and the electricity industry have been actively addressing cybersecurity risks for some years now,” said Gerry Cauley, president and CEO of NERC. “This initiative will more thoroughly examine the potential impact of a targeted cyber attack and how the industry should best coordinate the preparedness and response actions of cybersecurity experts with power grid operators.”

Other task forces formed in response to the Coordinated Action Plan include the Geomagnetic Disturbance Task Force, the Spare Equipment Database Task Force, the Severe Impact Resilience Task Force and the Smart Grid Task Force.

NERC Launches Interactive Reliability Indicators Display

NERC launched its interactive and dynamic reliability indicators display recently. The enhanced view provides meaningful dimensions of reliability condition-driven indicators and their trends aggregated at NERC and the regional level. The display enables viewers to interact with the charts, as well as search specific supporting information through multilevel drilldown features. To see the full display, click here.

NERC Workshop on Accommodating High Levels of Variable Generation

NERC is conducting a workshop on NERC’s ongoing activities addressing the integration of high levels of variable generation on April 12 in Kansas City, Mo.

The workshop takes place in conjunction with the 2011 Utility Wind Integration Group’s (UWIG) Spring Technical Workshop.

NERC’s published reports review bulk power system planning and operational reliability considerations; identify areas for improvement; and provide input into NERC’s standards process. The conclusions and status of completed and ongoing efforts in Planning, Probabilistic Methods, Interconnection Considerations and Operations will be reviewed.

To view the workshop agenda, click here.
STANDARDS

Information on How a Standards Project Undergoes Development

Several steps are involved in the development, modification or withdrawal of a reliability standard. Most new standards projects will have been identified in the latest approved Reliability Standards Development Plan and stakeholders can contribute to the initiation of new projects in the plan using one of two tools: the Standard Authorization Request (SAR) form or the Suggestions and Comments form.

A SAR is submitted when an entity or individual has an explicit proposal for a new or modified standard. The SAR form documents the scope and reliability benefit of a proposed project for one or more new or modified standards and can be submitted at any time. When submitted for consideration, a SAR should be accompanied with a technical justification that includes, at a minimum, a discussion of the reliability-related impact and a technical foundation document (e.g., research paper), when needed, to guide the development of the new or modified standard(s).

Standards staff works with the entity or individual submitting the SAR to ensure all necessary information is included in the SAR. The SAR is then submitted to the Standards Committee for approval. If the Standards Committee accepts the SAR (and does not remand it, reject it or require further technical justification), a project to address the issues identified in the SAR will be added to the list of approved projects and assigned priority for initiation by the Standards Committee relative to other projects already identified in the Plan.

Alternatively, stakeholders can submit suggestions and comments via a form that are not developed enough to merit the submission of a SAR. Each year, in conjunction with the annual revision to the Reliability Standards Development Plan, NERC’s standards staff sponsors an open-solicitation period seeking ideas for new standards projects – an ideal time to submit a suggestion and comment form. However, stakeholders are encouraged to submit suggestions and comments at any time.

Once a Suggestions and Comments form is submitted, the information provided is captured in the NERC Standards Issues Database, a tool used to track issues associated with the NERC reliability standards. Ultimately, the information contained in the Standards Issues Database is used to direct each of the standards development projects. Output from the database is used as a checklist for standards projects and significantly informs the development of the Reliability Standards Development Plan.

Whether a SAR or a Suggestions and Comments, the Standards Committee and standards staff work together to consider the body of potential projects and assign priorities to continue the standard development process, beginning with the posting of SARs for industry comment.

Both the SAR and the Suggestions and Comments forms have proven useful for the development of new reliability standards. The Standards Committee Processes Subcommittee and the Standards Committee Communication and Planning Subcommittee currently are working to improve the format and use of these forms. Both committees encourage stakeholder feedback on the format and use of these forms. If you have suggestions for improvement or other aspects of the process identified in the Standard Processes Manual, please contact Laura Hussey or Mallory Huggins.

NERC’s Standards Process: Key Features for Industry Participants

NERC’s Standards Committee Communication and Planning Subcommittee recently posted a white paper outlining key features of NERC’s standards process (described in detail in the Standard Processes Manual, which was approved by FERC on September 3, 2010). The white paper does not revise, add to, or in any way impact the implementation of the approved process in the Standard Processes Manual; rather, it aims to highlight opportunities for industry participation throughout that process. The paper is available under Resource Documents on NERC’s Standards webpage. Contact Mallory Huggins with any questions about the paper.
Standard Drafting Team Vacancies
Any industry stakeholder meeting the indicated qualifications for one of the following vacant appointments may submit a self-nomination form to sarcomm@nerc.com. Further instructions can be found on the Drafting Team Vacancies page on NERC’s website.

Project 2007-02 Operating Personnel Communications Protocols
Seeking an individual with physical security experience, an individual with cyber security experience, and an individual from the Eastern Interconnection. Candidates should have experience developing verbal or written communication protocols for real-time operating personnel or managing real-time bulk electric system operations, or be a member of the Reliability Coordinator Working Group.

Project 2007-06 System Protection Coordination
Seeking an individual from a Canadian entity with experience in coordination of protection systems (new installations and revisions).

Project 2007-12 Frequency Response
Seeking an individual representing Transmission Dependent Utilities with experience in analyzing or modeling frequency response.

Project 2010-13 Relay Loadability Order 733
Seeking individuals from the Northeast Power Coordinating Council, Southeast Reliability Corporation, and a Canadian entity with experience in the application of protective relays on generating units, generator step-up transformers, and unit auxiliary transformers across the United States and/or Canada.

Please contact Andy Rodriguez with questions regarding the vacancies.

SITUATION AWARENESS

NERC Awards Situation Awareness Contract to SmartCloud
The North American Electric Reliability Corporation (NERC) announced it has selected SmartCloud, Inc., to develop, implement and host a situation awareness system for use by the Federal Energy Regulatory Commission, NERC, and the Regional Entities.

The project, called SAFNR Version 2, will be used in the situation awareness program’s Electricity Sector Information Sharing and Analysis Center (ES-ISAC). NERC and the Regional Entities monitor operating conditions on the bulk power system in North America to maintain an awareness of situations that impact or have the potential to impact the reliability of the grid as they arise. The SAFNR project will provide near real-time information to situation awareness staffs at FERC, NERC and the eight Regional Entities.

“SAFNR Version 2 will give the NERC situation awareness team a near real-time view of conditions and emerging reliability events within the United States,” said Tom Galloway, senior vice president and chief reliability officer at NERC. “Having the ability to observe reliability parameters as they change on the grid is critical to fulfilling NERC’s obligation to monitor and evaluate the reliability performance of the North American bulk power system.”

The SmartCloud team is comprised of SmartCloud Inc. in Bedford, Mass., which specializes in real-time data orchestration; PowerWorld Corporation in Champaign, Ill., which specializes in power system visualization; and InStep Software, LLC, in Chicago, which specializes in data storage and visualization.

The original SAFNR tool, which was implemented on June 1, 2009, displays limited data and uses display formats that are unique to each Reliability Coordinator. The users developed a specification document that identified additional data and functionality requirements to provide a system that achieves enhanced situation awareness, particularly in the near real-time horizon with a focus on common visual representation of the information and increased trending capability.
NERC Filings to FERC
(click on the link for full filing)

March 2, 2011
Comments of NERC on November 18, 2010 NOPR on the Integration of Variable Energy Resources
NERC submits comments on the November 18, 2010 Notice of Proposed Rulemaking on the Integration of Variable Energy Resources and FERC’s proposal to “reform the pro forma Open Access Transmission Tariff to remove unduly discriminatory practices and to ensure just and reasonable rates for Commission-jurisdictional services.” Docket No. RM10-11-000

March 16, 2011
Informational Filing in Response to FERC’s September 16, 2010 Order Regarding NERC’s Three Year ERO Performance Assessment
NERC submits an Informational Filing in Response to FERC’s September 16, 2010 Order regarding NERC’s Three Year ERO Performance Assessment Report. The September 16, 2010 Order contained a number of specific directives and other actions that NERC was to address in an informational filing to be submitted within six months. NERC is commenting on or providing current information concerning its activities with respect to a number of the areas of additional guidance. Docket Nos. RR09-7-000 and AD10-14-000.

March 18, 2011
Supplemental Information regarding a Notice of Penalty - NP11-128
NERC submits supplemental information regarding a Notice of Penalty for an Unidentified Registered Entity. Docket No. NP11-128-000

Supplemental Information regarding a Notice of Penalty - NP11-114
NERC submits supplemental information regarding a Notice of Penalty for Texas Municipal Power Agency. Docket No. NP11-114-000

Petition for Approval of a Protection and Control (PRC) Reliability Standard PRC-023-2
NERC submits a petition for approval of PRC-023-2 – Transmission Relay Loadability. NERC also requests FERC approval of a proposed addition to the NERC Rules of Procedure, Section 1700 – Challenges to Determinations. This filing satisfies certain directives the Commission issued in Order No. 733 pertaining to developing modifications to PRC-023-1. Docket No. RM08-13-000

March 21, 2011
Supplemental Information to the NERC Compliance Filing in Response to the Order on Violation Severity Levels Proposed by the ERO
Supplemental Information to the NERC Compliance Filing in Response to the Order on Violation Severity Levels (VSLs) Proposed by NERC. Docket Nos. RR08-4-000, RR08-4-001, RR08-4-002, and RR08-4-005

Comments of NERC Following the February 8, 2011 Technical Conference on Priorities for Addressing Risks to the Reliability of the Bulk-Power System
NERC files comments following the February 8, 2011 Technical Conference on Priorities for Addressing Risks to the Reliability of the Bulk-Power System. Docket No. AD11-6-000

Compliance Filing in Response to January 20, 2011 Order on Violation Risk Factors and Violation Severity Levels for CIP Reliability Standards
NERC submits a Compliance Filing in Response to January 20, 2011 Order on Violation Risk Factors (VFRs) and Violation Severity Levels (VSLs) for Critical Infrastructure Protection Reliability Standards. Docket No. RD10-6-000, R D09-7-002

March 30, 2011
Petition for Approval of a Proposed Modification to Protection System Definition
NERC submits a Petition of NERC for Approval of a Proposed Modification to the Glossary of Terms Used in Reliability Standards Definition of “Protection System.” Docket No. RM__-

March 31, 2011
Petition for Approval of Proposed New Reliability Standards and Implementation Plans Related to Under-Frequency Load-Shedding
NERC submits a Petition for Approval of Proposed New Reliability Standards and Implementation Plans Related to Under-Frequency Load-Shedding. In this filing, NERC requests the FERC to approve PRC-006-1 and EOP-003-2 and requests FERC approval for implementation plans that call for the retirement of PRC-006-0, PRC-007-0, PRC-009-0 and EOP-003-1. Docket No. RM06-16-000

Petition for Approval of Four Transmission Planning System Performance Reliability Standards and Retirement of Four Existing Reliability Standards
NERC submits a Petition for Approval of Four Transmission Planning System Performance Reliability Standards and Retirement of Four Existing Reliability Standards. NERC requests that FERC approve four revised Reliability Standards: TPL-001-1, TPL-002-1b, TPL-003-1a, and TPL-004-1. NERC also seeks the concurrent retirement of four existing Reliability Standards: TPL-001-0, TPL-002-0b, TPL-003-0a, and TPL-004-0. Docket No. RM06-16-009
CAREERS AT NERC

Compliance Enforcement Analyst – Mitigation/Reporting
Location: Washington, DC
Details

Compliance Enforcement Analyst
Location: Washington, DC
Details

Senior Compliance Analyst
Location: Washington, DC
Details

Senior Certification and Compliance Auditor
Location: Atlanta, GA
Details

Certification and Compliance Auditor
Location: Atlanta, GA
Details

Senior Regional Entity Compliance Program Auditor
Location: Atlanta, GA
Details

Executive Assistant to Chief Security Officer (CSO)
Location: Washington, DC
Details

Critical Infrastructure Protection Policy and Coordination Manager
Location: Washington, DC
Details

Critical Infrastructure Protection Standards Specialist
Location: Washington, DC
Details

Critical Infrastructure Protection Cybersecurity Specialist
Location: Washington, DC
Details

Senior Accountant
Location: Atlanta, GA
Details

Event Investigator
Location: Atlanta, GA
Details

Senior Windows Systems Administrator
Location: Atlanta, GA
Details

Website Administrator/Content Manager
Location: Atlanta, GA
Details

Legal Assistant
Location: Washington, DC
Details

Manager of Training
Location: Atlanta, GA
Details

Senior Engineer of Reliability Performance and Events Analysis
Location: Atlanta, GA
Details

Technical Training Specialist
Location: Atlanta, GA
Details

Situation Awareness Coordinator
Location: Atlanta, GA
Details

Standards Development Adviser
Location: Atlanta, GA
Details

Personnel Certification Manager
Location: Atlanta, GA
Details
RSC Members and All,

See the attached notification of a Compliance and Standards workshop. Currently the draft agenda indicates a the standards area will be having an overview session on the second day which I will be presenting, and the third day will be the usual classroom format. We are planning an overview of all regional developmental activities and I am considering a panel with a representative from each of the regional standard drafting teams and perhaps key RSC members along with my staff to address all questions. I also may ask a compliance staff person to be present to ensure we can cover any areas that may come up. I will forward the agenda with times and solicit for the panel soon.

Thank-you,

Guy V. Zito
Assistant Vice President-Standards
Northeast Power Coordinating Council, Inc.
1040 Avenue of the Americas, 10th Floor
New York, NY 10018
212-840-1070
212-302-2782 fax

Good Morning NPCC Registered Entities and Members: 

Please see the attached regarding the Spring 2011 Compliance and Standards Workshop.

Thank you,

Francine Cox
Meeting Coordinator/Administrative Assistant

Northeast Power Coordinating Council, Inc.
1040 Avenue of the Americas, 10th Fl
New York, NY 10018
(212) 840-1070 Direct Line
(212) 302-2782 Fax
Email: fcox@npcc.org
NPCC, Inc.
AGENDA
NPCC Compliance and Standards Workshop Spring, 2011

Introduction

NPCC will be holding the Spring 2011 Compliance and Standards Workshop at the Providence Marriott Downtown in Providence, Rhode Island. All registered entities are invited to participate in this workshop. At this workshop, NPCC is introducing an expanded format that will allow for a number of current topics and issues to be discussed.

The opening session will focus on different perspectives of “Reliability Excellence”. Once again, NPCC is going to offer breakout sessions that are smaller and more focused on both compliance and regional standards related issues. Among the presentations NPCC has also included specific presentations on Critical Infrastructure Protection (CIP) implementation and Technical Feasibility Exceptions “TFE”s, that will present the latest information related to these subjects.

Workshop Dates and Location

Tuesday, May 10 (1:00 pm to 5:00 pm)
Wednesday, May 11 (8:00 am to 5:00 pm)
Thursday, May 12 (8:00 am to 12:00 pm)

Providence Marriott Downtown
One Orms Street
Providence, Rhode Island 02904
Phone: (866) 807-2171 or (401) 272-2400
Room Block Code: Northeast Power Coordinating Council, Inc.
Room Rate: $155.00
Room Block: May 10-11, 2011
Check-in 3 p.m. Check-out 12 p.m.
Cutoff Date: April 21, 2011

All guests must identify themselves as members of Northeast Power Coordinating Council group. A deposit equal to one night’s stay is required to hold each reservation.

Attire

Business Casual

Registration

Advance registration is required. A registration form is attached. Fee to cover cost of the workshop is $200 (US). Breakfast, Lunch, Dinner (on the first night) and breaks are provided. Reception will be held on Tuesday night, prior to dinner, with a cash bar. Participants will be responsible for their own hotel accommodations. Rooms are available at the Marriott Providence Downtown and to receive the discounted rate mention the Northeast Power Coordinating Council, Inc. group.


Workshop Objectives/Topics

- Status of the NPCC Compliance implementation for 2011
- Discussion of Compliance Registration
- NPCC Regional Standards and Directories
- Bulk Electric System discussion
- Update on Enforcement issues
- Classroom breakouts for registered entities
- Presentations by NPCC Staff and NERC

Who Should Attend

- NPCC Inc. Members and all those who are registered for compliance with NERC and NPCC
- Independent System Operator staffs and committee members
- Transmission and Generation owners
- Independent Power Producers
- Control Area and Transmission System Operators and Planners
- Power Marketers
- Regulators
- Other Electric Industry Participants
- NPCC Inc. Committee, Task Force and Working Group members
Preliminary Agenda
NPCC Compliance and Standards Workshop
Spring 2011

Providence Marriott Downtown
One Orms Street
Providence, Rhode Island 02904

Day One - May 10, 2011

11:30 a.m. – 12:00 p.m.  Registration
12:00 p.m. – 1:00 p.m.  Lunch
1:00 p.m. – 1:45 p.m.  Introduction - “Reliability Excellence” (Stanley Kopman – Assistant Vice President – Compliance Registration and Enforcement, NPCC, Inc.)
1:45 p.m. – 2:30 p.m.  Industry Presentation (Speaker to be confirmed)
2:30 p.m. – 3:15 p.m.  FERC Presentation (Speaker to be confirmed)
3:15 p.m. – 3:30 p.m.  Break
3:30 p.m. – 4:15 p.m.  NERC Presentation (Jim Hughes)
4:15 p.m. – 5:00 p.m.  Panel Discussion - North American Transmission Forum, (Donald M. Benjamin, Executive Director); North American Generator Forum (To Be Confirmed)
6:00 p.m. – 7:00 p.m.  Reception for Participants
7:00 p.m. – 9:00 p.m.  Dinner
Preliminary Agenda
NPCC Compliance and Standards Workshop
Spring 2011

Providence Marriott Downtown
One Orms Street
Providence, Rhode Island 02904

Day 2 - May 11, 2011

7:00 a.m. – 8:00 a.m. Breakfast
8:00 a.m. – 9:10 a.m. Classroom Session A, B, C (See description below.)
9:25 a.m. – 10:35 a.m. Classroom Session A, B, C (See description below.)
10:35 a.m. – 10:50 a.m. Break
10:50 a.m. – 12:00 p.m. Classroom Session A, B, C (See description below.)
12:00 p.m. – 1:00 p.m. Lunch
1:00 p.m. – 1:45 p.m. NPCC Compliance Program Overview
               (Sal Buffamante – Assistant Vice President – Compliance Audit Program and Investigation)
1:45 p.m. – 2:30 p.m. NPCC Standards Program (Guy Zito – Assistant Vice President – Reliability Standards)
2:30 p.m. – 3:00 p.m. NPCC Enforcement Program (Walter Cintron – Manager, Compliance Enforcement)
3:00 p.m. – 3:30 p.m. Break
3:30 p.m. – 4:00 p.m. Latest Compliance Activities from a Legal Perspective
               (Margaret Mayora – NPCC Compliance Attorney)
4:00 p.m. – 4:30 p.m. Culture of Compliance Survey (Scott Nied – Senior Compliance Engineer)

Classroom Session A- 2011 Audit Program
Classroom Session B – Enforcement Process
Classroom Session C - Development of Regional Standards
Preliminary Agenda
NPCC Compliance and Standards Workshop
Spring 2011

Providence Marriott Downtown
One Orms Street
Providence, Rhode Island 02904

Day 3 - May 12, 2011

7:00 a.m. – 8:00 a.m.  Breakfast

8:00 a.m. – 8:30 a.m.  CIP Standards Presentation (Speaker to be confirmed)

8:30 a.m. – 9:00 a.m.  Technical Feasibility Exception (TFE’s) Presentation (Speaker to be confirmed)

9:00 a.m. – 9:30 a.m.  BES and Coordination of NPCC Reliability Practices (Phil Fedora – Assistant Vice President – Reliability Services)

9:30 a.m. – 10:00 a.m.  Break

10:00 a.m. – 10:30 a.m.  Event Analysis From a Compliance Perspective (Ralph Rufrano – Manager Compliance Investigations)

10:30 a.m. – 11:30 a.m.  Topical Issues: CANS, Facility Ratings, Mis-Operations, etc. (Speakers to be determined)

11:30 a.m. – Noon  Wrap-up
Registration Form

NPCC Compliance and Standards Workshop

Providence Marriott Downtown
One Orms Street
Providence, Rhode Island 02904

May 10-12, 2011

Name: ____________________________
Organization: _______________________
Address: ___________________________
City/State/Zip: _______________________
Phone: ______________________________ Fax: ______________________________
Email address: _______________________

Meal:

Dinner (Tuesday, May 10, 2011) Yes [ ] No [ ]

REGISTRATION FEE: $200 (US), excluding guest speakers
Payable to: Northeast Power Coordinating Council, Inc.
(by check or money orders only,
No credit cards)

Send completed Registration Form along with payment to:
Northeast Power Coordinating Council, Inc.
1040 Avenue of the Americas, 10th Floor
New York, New York 10018
Phone: (212) 840-1070
Fax (212) 302-2782
Owners of Mass. nuclear plant say facility is safe

By STEVE LeBLANC , 04.07.11, 10:06 AM EDT

BOSTON -- The owners of the Pilgrim Nuclear Power Station in Plymouth, Mass. offered reassurances to state lawmakers Wednesday that the plant is safe, even as Japan continues to reel from the aftermath of a nuclear power disaster.

Entergy Corp. (ETR - news - people) officials said that while Pilgrim's design is similar to that of the Fukushima plant, theirs have backup systems that the Japanese plant lacked, including extra diesel generators and better venting systems.

The comments came as Gov. Deval Patrick and top legislative leaders sent a letter to the U.S. Nuclear Regulatory Commission urging that it hold off on Pilgrim's relicensing request.

"We ... encourage you not to proceed with any steps toward relicensing until we can all be sure that we have learned what we need to from the experience in Japan," Patrick wrote in the letter, which was also signed by fellow Democrats Senate President Therese Murray, whose district includes Plymouth, and House Speaker Robert DeLeo of Winthrop.

Murray and state Attorney General Martha Coakley, both of whom testified at Wednesday's public hearing, urged federal officials to require the owners of Pilgrim to adopt a dry-cask method of storing spent fuel rod.

The plant currently relies on wet storage, similar to the Japanese plant.
Entergy officials said they are planning to move to a dry fuel storage system. They said plans are already under way and fuel rods could begin moving into the new $65 million facility by 2013.

Even when the new system is in place, officials cautioned, spent fuel rods must still sit in water for five years to continue cooling down before they can be safely moved to dry storage.

Overall, they said, Pilgrim has greater safety measures than the Fukushima plant.

"We have two emergency diesel generators, each of which is redundant to one another and then we have a third redundant diesel generator that we refer to as the station blackout diesel," said Michael Balduzzi, senior vice president and chief operating officer of Entergy's northeast region.

The diesel generators are designed to deliver power for seven days, he said. The plant also has batteries designed to last eight hours.

New Orleans-based Entergy also owns the Vermont Yankee plant, which already has dry fuel storage, officials said.

Coakley faulted the federal government for continuing to collect ratepayer dollars for a national repository for spent nuclear fuel while failing to create the depository.

"Our residents, as ratepayers, have contributed to a $24 billion fund that should have been used to make our communities safer almost 20 years ago," Coakley said. "They also continue to incur $10 million a year for the cost of onsite storage at decommissioned sites."

Before the hearing, dozens of sign-holding activists chanted "no more nukes" during a rally on the front steps of the Statehouse.

Speakers at the rally said no new plants should be built in the U.S. and no existing ones relicensed until after a number of safety concerns are addressed.

Among those concerns, activists said, was what they described as the unsafe storage of spent fuel rods and submerged electrical cables at plants such as Pilgrim and New Hampshire's Seabrook that have been degraded by moisture as they age. They pointed out that the Fukushima accident was caused in part by the loss of electricity to the complex.

Officials from Entergy said they have tested submerged cables and found they were safe.

Paul Blanch, a retired Navy nuclear engineer, told the gathering that he was not opposed to the nuclear industry but believed regulation of commercial plants was lacking.

While it was unlikely that Massachusetts would be hit by a tsunami, nuclear plants could be compromised by other events.
such as hurricanes, tornadoes, floods and terrorist attacks, Blanch said.

"Can it happen here?" he said. "We all know that Pilgrim is about the same design as the Fukushima plants, and it can happen here."

Associated Press writer Bob Salsberg contributed to this report.

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Oil From The Sun

Apollo Goes Public

Cuba's Oil Drilling Plan Is A Great Reason To End U.S. Embargo

Muni Bond Bubble

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Owners of Mass. nuclear plant say facility is safe - Forbes.com

Performance Metrics

For Independent System Operators
And Regional Transmission Organizations

A Report to Congress in Response to Recommendations of the United States Government Accountability Office

PERFORMANCE METRICS
For Independent System Operators
And Regional Transmission Organizations

A Report to Congress
In Response to Recommendations of the United States Government Accountability Office

April 2011

Federal Energy Regulatory Commission
Office of the Chairman

888 First Street NE, Washington DC 20426
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6 Commission Staff Analysis

**APPENDICES** This report and the following appendices are provided online at www.FERC.gov.

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*ISO/RTO Performance Metrics Development Process*

B-1 APPENDIX B:  
*Commission Staff Report*  

C-1 APPENDIX C:  
*Performance Metrics Summary*  

D-1 APPENDIX D:  
*Report of California Independent System Operator Corporation*  

E-1 APPENDIX E:  

F-1 APPENDIX F:  

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H-1 APPENDIX H:  
*Report of PJM Interconnection, L.L.C.*  

I-1 APPENDIX I:  
*Report of Southwest Power Pool, Inc.*  
MESSAGE FROM THE CHAIRMAN

To the Chairman and Ranking Member of the Senate Committee on Homeland Security and Governmental Affairs, and the Chairman and Ranking Member of the House Committee on Oversight and Government Reform:


Under my direction, Commission Staff has led an 18-month voluntary and collaborative process with ISOs, RTOs, transmission customers, market participants and other stakeholders and interested experts to develop metrics that track the performance of ISO/RTO operations and markets in delivering benefits to consumers for those ISO/RTOs under the jurisdiction of the FERC. This information provides the framework for an ongoing analysis of ISO/RTO performance; as well as a starting point for further evolution of these measures into industry best practices by ISO/RTOs.

The culmination of these efforts to date has been the submittal of performance metrics reports by each of the ISOs and RTOs which are attached in the Appendices to this report. These reports, that represent the first step in a multi-year evaluation of performance for utilities under the jurisdiction of the FERC, provide a wealth of information on the ISO/RTO markets and operations over a five-year period (2005 – 2009) for 57 performance measures. As outlined in FERC’s FY 2009-2014 Strategic Plan, next steps in this evaluation include development of performance metrics in non-RTO regions in fiscal year 2011 followed by development of common metrics for both ISOs/RTOs and non-RTO regions – thereby allowing for comparisons across all electric regions and markets – and further evaluation of the performance results in subsequent fiscal years.

Jon Wellinghoff
Chairman
Federal Energy Regulatory Commission
Commission Staff Analysis

This Commission Staff analysis\(^1\) provides a high level overview of some of the more significant aspects of the performance metrics submitted by the ISOs and RTOs\(^2\) in Appendices D through I. Commission Staff plans to continue to evaluate this large body of information and analysis that has been compiled for the first time. However, we believe the full value of this effort will take several years to materialize. In the longer term the metrics will assist the utility industry, stakeholders and the Commission in evaluating industry trends and best practices.

Before discussing our overview of the performance results, the basic characteristics of the ISOs and RTOs under the Commission’s jurisdiction must be understood. Each ISO/RTO is responsible for managing the high-voltage electric transmission assets of its member utilities and the wholesale electricity market(s) for the region it serves. As can be seen on the ISO/RTO Map, however, there are significant differences in the geographic scale of the ISOs and RTOs. NYISO and CAISO operate within a single state, while others operate in a multi-state environment, such as the Midwest ISO which operates in all or parts of 13 U.S. states and the Canadian province of Manitoba. There are also differences in the scope of their respective operations. For example, in addition to providing open-access transmission services, SPP operates a single real-time balancing market for its members whereas other ISO/RTOs operate a number of markets, including longer-term energy markets, ancillary services markets and capacity markets.

These differences must be kept in mind when evaluating performance results across the ISOs and RTOs. Recognizing these differences, ISO/RTO performance can be compared in the following ways:

- **Direct comparisons can be made of performance for certain metrics that reflect activities under the control of ISOs/RTOs and that are not a function of the scale and scope of the ISOs/RTOs.** Metrics in this category include a metric that compares ISO/RTO actual administrative spending with budget forecasts, as well as metrics on billing audits and customer satisfaction indices.

- **Other metrics are best compared in terms of their performance trends over the 2005-2009 review period.** Clearly, some of the performance results reflect the impact of a wide range of factors beyond simply performance. Differences in market prices between the ISOs and RTOs, for example, reflect

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\(^1\) The opinions and views expressed in this staff analysis do not necessarily represent those of the Federal Energy Regulatory Commission, its Chairman, or individual Commissioners, and are not binding on the Commission.

different resource profiles in the various ISO/RTO regions. Since entities other than ISOs and RTOs develop and operate resources, ISOs and RTOs must work within the parameters of their given resource profiles to improve efficiency in the markets within their regions. While market prices within ISOs/RTOs differ, the five year trend for each ISO/RTO will provide a better basis to compare the relative performance among ISOs/RTOs, particularly with respect to market metrics that more directly measure costs that can be influenced by ISO/RTO programs designed to make markets operate efficiently, as discussed more fully below.

- As explained in the narratives provided in the ISO/RTO performance reports, all metrics must be evaluated in the context of all of the factors that influence performance, to determine the extent to which the metrics are measuring ISO/RTO performance and the extent to which they reflect the impact of other factors.
Review of Performance Results

ISO/RTO metrics were designed to measure performance on three dimensions: (1) market benefits; (2) organizational effectiveness; and (3) reliability. The following provides highlights of the performance results in each of these categories.

Market Benefits

ISO and RTO markets provide benefits to energy producers and consumers to the extent their markets are competitive and their programs for making their markets operate more efficiently are successful in lowering customer costs. ISO/RTO security-constrained economic dispatch3 is intended to facilitate maximum participation by all resources and maximum utilization of the least-cost resources, thereby enhancing competition and ensuring a reasonable cost of energy for customers. ISO/RTO efficiency programs, such as incentives to induce resources to be available, are intended to ensure the full benefits of competition are realized.

Of the 16 metrics developed to measure the performance of ISOs and RTOs in delivering market benefits, and that are detailed in the reports in Appendices D through I, we focus below on one of the competition metrics, several efficiency metrics, such as generator availability, and the market price measures.

The price-cost metric (Chart 1) compares the marginal price to the marginal cost of energy production. The closer the marginal price is to the marginal cost, the more competitive the market. Performance against this metric supports the proposition that all ISOs/RTOs have competitive markets, as reflected in the close parity of marginal prices and marginal costs.4 However, there are some differences in data reported by the ISOs and RTOs that result from historical differences during the reporting period. CAISO’s report for this metric relies on estimates based on bilateral price indices and cost estimates for the earlier years. Only the 2009 data represents actual market data, because CAISO did not have a forward energy market prior to that time. As a result, while the CAISO trend appears to show marginal prices and marginal costs converging, indicating more competitive conditions, such a conclusion may not be accurate. We also note that while it appears that the PJM price-cost markup in 2007 reflects less competitive conditions, a substantial portion of the 2007 markup occurred on high-load days. Therefore, it is likely that the higher prices were the result of administratively-determined scarcity pricing rather than the exercise of market power.

3 Security-constrained economic dispatch is the operation of generation facilities to produce energy at the lowest cost to reliably serve consumers, recognizing any operational limit of generation and transmission facilities. See Energy Policy Act of 2005, section 1234.

4 SPP does not report a price-cost mark-up. Its Independent Market Monitor assesses its market to be competitive based on an evaluation of threshold tests for market-based rate applications.
Commission Staff plans to continue to monitor this metric in future reports as additional actual market data is generated and included in the metric.

Additional indicators that support the conclusion that ISO/RTO markets are competitive are low market concentration indices, as discussed in more detail in the individual ISO/RTO performance reports, and energy market prices are closely tracking fuel costs, discussed further below. Also, demand response entering markets as new resources have provided additional competition.

The market benefits of ISO/RTO programs for making their markets operate more efficiently can be measured by the generator availability, demand response availability and congestion management metrics. While resource availability and congestion management are influenced by market factors, incentive programs for resource participation and effective transmission planning by ISOs/RTOs to manage congestion can also improve efficiency.

See, for example, Appendix F at p. 106.
Generator availability (Chart 2) was in the range of 91 to 98 percent over the 2005 – 2009 period. It is noteworthy that the five-year trend in ISO-NE generator availability reflects improvements in the availability of generators using all fuels except coal generation that declined slightly. The trend in decreasing availability in PJM reflects the impact of decreased availability of older coal-fired generation units that outweighed reduced outage rates system-wide over this period.\(^6\) It is not possible to assess the causes of the decreasing generator availability reflected in the Midwest ISO generator availability metric because the Midwest ISO based the data reported for the years prior to 2009, in part, on North American Electric Reliability Corporation (NERC) industry-wide class average estimates\(^7\) rather than on actual data provided by generators in the Midwest ISO.

ISOs and RTOs have evaluated demand response availability during emergency events, such as the August 2006 heat wave, as discussed in their reports. It is not possible to show this information on a chart due to the lack of comparable information across all ISOs and RTOs. ISO-NE estimated the availability of

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\(^6\) See Appendix H at p. 300 for a complete discussion.

\(^7\) NERC estimates class average capacity factors for the various types of generation based on historical data.
all demand response resources, passive and active, to be 84 percent based on events from August 1, 2006 through August 25, 2009. In NYISO, demand response provided 865 MW on August 2, 2006 and 345 MW on July 27, 2006 during emergency conditions. In PJM, demand response availability was 121 percent in 2006 and 118 percent during testing in 2009/2010.

Congestion costs vary between the ISOs and RTOs, reflecting differences in system topologies and shifts in loads over the evaluation period, as detailed in the discussion in the Appendices. Nonetheless, ISO/RTO programs can have an impact on congestion, for example through transmission planning initiatives. As an example, PJM’s Regional Transmission Expansion Plan includes increases in transmission system capacity that are expected to alleviate 90 percent of the current congestion costs in the region.

Finally, with respect to the bottom line for consumers – their costs – security constrained economic dispatch and ISO/RTO efficiency programs have yielded benefits. For example, PJM was able to reduce annual generation production costs by $122 million due to improved generation dispatch in 2009. Security constrained economic dispatch also reduced reliance by ISOs and RTOs on less efficient and less reliable physical and manual procedures, such as transmission loading relief, to resolve system constraint problems. Midwest ISO was particularly successful in reducing transmission loading relief, from 842 in 2006 to 371 in 2009.

Market price trends in Chart 3 (on next page) reflect the impact on market prices of market factors such as fuel costs as well as ISO/RTO efficiency programs. The top two lines in Chart 3, the energy cost and total power cost metrics, illustrate the impact of fuel price trends. As detailed in the ISO/RTO performance reports, the nation-wide increase in fuel costs in 2008 and the decrease in 2009 were closely tracked in wholesale energy prices. More relevant to an assessment of ISO/RTO performance is the bottom line in Chart 3, the market price adjusted for fuel costs. This metric, when compared to unadjusted market prices, shows the impact of security constrained economic dispatch, incentives for improved generator availability, investment in more efficient generating units and other factors on prices. Therefore, this metric provides a measure of the efficiency of the ISO/RTO markets, and how that efficiency provides a benefit to consumers in their cost of energy. It should be noted that each of the ISOs/RTOs uses a different base year for their fuel adjustments and different fuel mixes and therefore direct comparisons among the ISOs/RTOs are not meaningful. The meaning and significance of the trends in this metric for each ISO/RTO are of particular interest to Commission Staff and will be evaluated further in future reports.

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8 Congestion occurs when the physical limits of a line prevent load from being served with the least cost energy. Congestion costs measure the difference between the actual cost of energy and least cost energy.

9 Transmission loading relief is an action taken by a Reliability Coordinator to ensure that reliability is maintained within the operating limits of a transmission system. Such actions include curtailment of transmission transactions and load shedding.
Demand response participation reduced market prices, as discussed in the ISO/RTO reports. It is not possible to show this information on a chart due to the lack of comparable information across all ISOs and RTOs. ISO-NE estimates that demand response participation reduced real-time prices from $0.04 to $1.43/MWh over the 2008 – 2009 period. Demand response in NYISO provided an average price reduction of $0.27 per MWh during 2005 – 2009 resulting in a total savings of $44 million over this period. PJM estimates that demand response saved $650 million during the August 2006 event and that wholesale energy prices were reduced by more than $300 per MWh during the highest usage hours. Demand response in Midwest ISO provided approximately 3000 MW during the August 2006 emergency event, reducing clearing prices by $100 - $200 per MWh for savings of over $3 million.

1. The CAISO Load Weighted LMP and Total Power Cost is the same for years 2005-2008.
2. Data for SPP is only available since 2007. The SPP Load Weighted LMP and Total Power Cost is the same for years 2007-2009.

Note: Total power costs include the cost of energy, transmission, capacity, ancillary services and administrative costs. Load-weighted LMP represents the average load-weighted wholesale electricity energy spot prices in ISOs/RTOs. Fuel Adjusted LMP is derived by holding the fuel cost constant over the five-year period and represents the average load-weighted wholesale electricity energy spot prices that result from this adjustment.

Source: Derived from content presented in Appendices D through I.
Organizational Efficiency

The five organizational effectiveness metrics are designed to measure ISO/RTO performance in accomplishing their objectives in a cost-effective manner that provides value to market participants.

Of particular interest in this regard is the administrative cost metric. Between 2005 – 2009, CAISO and PJM reduced administrative costs per MWh of load, NYISO costs per unit of load held steady and Midwest ISO’s, SPP’s and ISO-NE’s costs per unit of load increased, as illustrated in Chart 4.
Reliability

The 36 reliability performance metrics were designed to measure both the reliability of day-to-day operations and long-term reliability. We focus on one of the day-to-day operational performance metrics and one of the long-term reliability metrics.

Real-time dispatch reliability in ISOs and RTOs, a short-term reliability measure (shown in Chart 5), was maintained at levels that exceeded national and regional reliability required standards, based on Control Performance Standard 1 and 2 metrics that measure the ability of Balancing Authorities to balance power demand and supply in real-time. Control Performance Standard 1 results were in the 188 to 123 percent range, significantly above the minimum required standard of 100 percent and Control Performance Standard 2 results were in the 188 to 123 percent range, significantly above the minimum required standard of 100 percent and...
mance Standard 2 results were in the 98 to 94 percent range, above the minimum required standard of 90 percent. These results indicate a strong level of compliance in this area of load-generation balancing under the current Reliability Standards.

ISOs and RTOs also play a role in ensuring long-term reliability through their long-term transmission planning programs that evaluate and prioritize regional reliability transmission projects. ISO/RTO long-term reliability transmission planning resulted in the approval of hundreds of reliability transmission projects over the 2005 – 2009 period as illustrated in Chart 6.

The transmission planning process is a comprehensive assessment that evaluates the impacts of a wide range of resource and load trends and technology innovations on the transmission system to ensure that the regional plans incorporate those transmission projects with the greatest reliability and economic benefit. Regional transmission plans include the consideration of demand response solutions to system requirements. Demand response accounts for 3 to 7 percent of installed capacity in a number of the ISO/RTO markets.

Source: Derived from content presented in Appendices D through I
Next Steps

In closing, the foregoing summary is intended to be a high level introduction to the performance metrics discussed in greater detail in the performance report appendices that follow. Commission Staff will be evaluating these reports further. In assessing these initial reports, the ISOs and RTOs have identified several challenges that we will evaluate in the next report.

- The need for new transmission capacity to ensure reliability and to reduce congestion.
- The need for improved wind and solar forecasts to address an increase in variable energy resources.
- The need to address the control, communication and reliability challenges associated with integrating demand response resources into energy and ancillary services markets.
- The need for more accurate transmission project cost estimates, thereby ensuring that the growing number of transmission expansion projects stay on schedule and obtain the support of stakeholders.

Further detail on these performance results as well as a complete assessment of the 57 performance metrics are provided in the Performance Metrics Summary in Appendix C and the individual ISO/RTO reports in Appendices D through I. Also, the ISO/RTO Performance Metrics Development Process in Appendix A describes the voluntary and collaborative process undertaken by Commission Staff to develop ISO/RTO performance metrics with input from the ISOs and RTOs, transmission customers, market participants and other stakeholders and interested experts. This voluntary and collaborative approach will be used to develop performance metrics for non-ISO/RTO regions during fiscal year 2011. The Commission Staff Report in Appendix B provides a summary of comments from stakeholders and other interested parties and Commission Staff’s recommendations that resulted in the final list of metrics.
Appendix A

ISO/RTO Performance Metrics Development Process

» Commission Staff, at the Chairman’s direction, initiated the development of ISO/RTO Performance Metrics in May 2009.

» Through the summer and fall of 2009 Commission Staff developed a list of proposed performance metrics and discussed them with a team of ISO and RTO staff representing the ISOs and RTOs under the jurisdiction of the Federal Energy Regulatory Commission.¹

» In January 2011 Commission Staff held focused outreach meetings with a variety of industry, consumer and state regulatory associations.²

» On February 2, 2010 Commission Staff issued the proposed performance metrics for comment and reply comment.

» On March 5 and March 19, 2010 comments and reply comments were filed by 59 parties.³

» Commission Staff reviewed the comments and issued a Commission Staff Report on October 21, 2010 (Appendix B). In the report, Commission Staff revised the proposed metrics based on the comments received and addressed issues raised by commenters. Commission Staff also requested that ISOs and RTOs submit reports with three to five years of data for the recommended metrics.⁴

» On December 6, 2010 the ISOs and RTOs submitted their reports.

» On April 7, 2011 the Chairman submitted this report to Congress.


³ The parties are listed in the Commission Staff Report in Appendix B.

⁴ These reports are attached as Appendices D through I.
Ladies and Gentlemen:

On October 7, 2010, NERC issued an Alert to Industry entitled “Consideration of Actual Field Conditions in Determination of Facility Ratings.” As a result, NERC received numerous questions about the alert and hosted two webinars. Then, on November 30, 2010, NERC posted a letter from President and CEO Gerry Cauley and an updated Alert, which can be found at: http://www.nerc.com/page.php?cid=5|63. Most recently NERC posted a Compliance Application Notice (CAN) on January 7, 2011, which can be found at: http://www.nerc.com/page.php?cid=3|22|354.

The attached Assessment Plan Review Criteria is used to provide guidance to Regional Entity staff in the review of assessment plans, to provide further assistance to the Owners in meeting the intent of the Recommendation, and to respond to those issues NERC stated it would provide further guidance for in its Question and Answer (Q&A) publication dated January 14, 2011.

Please interact with your members and provide any comments back to Roman Carter at roman.carter@nerc.net by close of business on May 10, 2011 in preparation for our webinar to discuss the changes on May 12, 2011.

Respectfully,

T. J. Galloway
Senior Vice President and Chief Reliability Officer

cc: Mr. Gerry Cauley, Mr. Roman Carter, NERC
The November 30, 2010 letter from Gerry Cauley provided guidance and information to Alert Recommendation recipients for performing the FAC assessments, including guidance and information regarding the prioritization of Transmission and Generation Owner's (Owners) facilities. This Assessment Plan Review Criteria is used to provide guidance to Regional Entity staff in review of assessment plans, provide further assistance to the Owners in meeting the intent of the Recommendation, and to respond to those issues NERC stated it would provide further guidance for in its Question and Answer (Q&A) publication dated January 14, 2011.

The majority of assessment plans reviewed are examples of what NERC considers to be good benchmarks and contains the appropriate level of content and detail. For example, those plans:

1. Provided detailed rationale for why its facilities were categorized as high, medium, or low.
2. Provided specific information on the type of technology being used in its assessment.
3. Included a timeline for completing the assessments which met the Recommendation’s intent.

Regional Entity staff will contact those Owners that have already filed assessment plans with the appropriate content and level of detail to inform them of that determination. For those owners, this document is for informational purposes only.

For a portion of the assessment plans reviewed, Regional Entity staff has determined that assessment plans are not adequate to verify that the actual conditions conform to the Owner’s design tolerances in accordance with its Facility Ratings Methodology or, that more information is required to make a determination. For example, some plans:

1. Did not prioritize facilities into high, medium, and low categories;
2. Provided no rationale for facility prioritization;
3. Did not provide details on how “as-built” construction conforms to the FAC ratings methodology;
4. Did not conform to the timelines given in the Recommendation.
Regions will continue to review Owners’ assessment plans, and where the Regional Entity (RE) believes the plans lack detail or are deficient, they will contact those Owners so that appropriate revisions can be made to the assessment plan. If any Owner believes its plan could be improved with the additional guidance, that Owner is encouraged to provide the RE with the appropriate revisions.

Note: The prioritization categories below should not replace regular operational communication between Owners and the Transmission Operator (TOP) and Reliability Coordinator (RC) regarding imminent threats to reliable operation of the BES.

A. Recommended prioritization of Facilities Impacting Reliability

For Owners who have submitted a deficient plan, the following criteria are being offered to advise an Owner regarding how to produce a sufficient plan. NERC recognizes that these criteria may not be appropriate for all entities and that individual plans should be developed (and evaluated by the Regional Entities) based on the characteristics and requirements of each individual system. Should an Owner determine that its prioritization of its transmission lines does not resemble the priority categories outlined below, but has an equal technically defensible risk-based prioritization approach, the Owner should consult with its RE and provide documentation to support its prioritization plan.

1) For Transmission Owners, recommendations for assessing BES transmission lines are as follows:

High (to be completed by end of 2011)
- Transmission facilities that are components of an identified IROL or key transfer paths
- Transmission Facilities identified by the Owner as critical to reliability
- Heavily loaded Transmission lines and/or 500 kV and above in the Eastern and Western Interconnections
- Within NPCC, transmission lines defined as Bulk Power Supply (BPS) elements in accordance with NPCC Document A-10, "Classification of Bulk Power System Elements"
- Transmission lines of 345 kV in the ERCOT Region

Medium (to be completed by end of 2012)
- Transmission lines 230 kV – 499 kV in the Eastern and Western Interconnections
Within NPCC, transmission lines 230 kV and higher which are not defined as BPS elements

For the ERCOT Region, transmission lines 138 kV originating from stations containing 345/138 kV auto transformers or generation facilities with a name plate rating exceeding 450 MW

Low (to be completed by end of 2013)

- Transmission lines below 230 kV in the Eastern and Western Interconnections
- Within NPCC, transmission lines 115 kV and higher which are not defined as BPS elements
- For the ERCOT Region, transmission lines 138 kV or lower not meeting the “medium” criteria listed above

2) For Generator Owners, recommendations for assessing generator tie-lines are as follows:

High (to be completed by end of 2011)

- Units specified as “must run” for reliability or for BES voltage support
- Units specifically designated as part of a Special Protection System/Remedial Action Scheme for automated runback or ramp-up
- Units specifically identified as part of a documented plan for mitigating an IROL violation
- Blackstart Resources identified in the Transmission Operator's restoration plan

B. It is recommended that each Assessment performed by the Owner be detailed enough to confirm the following applicable information:

- Conductor-to-conductor and conductor distance to objects (including ground clearance) occupying rights-of-way meet minimum clearance requirements of design
- Considered ambient conditions
- Considered operating limitations

C. Owner Update Spreadsheet
NERC is requesting each Owner provide semi-annual updates on the work performed to complete their assessment plans. The updates for their high priority transmission lines are due to the RE by July 15, 2011 and January 15, 2012. The updates for the medium priority transmission lines are due July 15, 2012 and
January 15, 2013. Finally, for the low priority transmission lines, the updates are due July 15, 2013 and January 14, 2014.

**Note:** A Discrepancy is when the Owner’s assessment is not adequate to verify that the actual conditions conform to the Owner’s design tolerances in accordance with its Facility Ratings Methodology and results in a derating of the line.

### D. What an Owner is recommended to do when a discrepancy is discovered

If an Owner identifies a condition or conditions it believes is a discrepancy, NERC recommends that the Owner report the discrepancy to its Reliability Coordinator (RC), Transmission Operator (TOP), and the Planning Authority (PA) at the time of the discrepancy. NERC recommends that the Owner include the details of the condition causing the discrepancy (ies) in its next semi-annual Owner update. Should the Owner determine another condition at a later date that it believes is a discrepancy, the Owner again needs to report that condition to its RC, TOP, and the PA at the time of the discrepancy and again include the details of the condition causing the discrepancy (ies) in its next semi-annual update.

### E. Level of detail NERC recommends for inspection dates and identifiers

NERC recommends that the Owner record the dates when inspections are being performed and be able to identify each transmission line and generator by a unique identifier, such as the NERC SDX common name. When a discrepancy does occur and is reported to its RC, TOP and the PA, NERC recommends that the Owner’s facility also refer to the unique identifier, such as the SDX common name, in both the report and in the next Owner Update.

### F. Recommended Technologies

Each Owner is recommended to utilize technologies that adequately address the Recommendation to confirm that any differences observed between design and actual field conditions are within design tolerances as defined by the Owner’s Facility Ratings Methodology. While Light Detection and Ranging (LIDAR) with Power Line Systems – Computer Aided Design and Drafting (PLS-CADD) technology are appropriate and acceptable, these particular technologies are not required. Other alternative technologies can be utilized to confirm that design and actual field conditions are within each Owner’s design tolerances such as:

- PS Guard Wide Area Monitoring System - ABB
- Sagometer – EPRI
- Thermal Line Monitor - LDIC GmbH
- Dynamic Line Rating System - Smarter Grid Solutions
- Power Line Sensor - Protura
FYI- Info on the Facility Rating Alert.

Guy V. Zito
Asst. Vice President-Standards
Northeast Power Coordinating Council, Inc.
1040 Avenue of the Americas, 10th Floor
New York, NY 10018
212-840-1070
212-302-2782 fax

FYI – in case you have not seen

Ladies and Gentlemen:

Please find attached the FAC Assessment Plan Review Criteria developed to provide guidance to Regional Entity staff in review of FAC Recommendation assessment plans, provide further assistance to the Transmission and Generator Owners in meeting the intent of the Recommendation, and to respond to those issues NERC stated it would provide further guidance for in its Question and Answer (Q&A) publication dated January 14, 2011.

Please interact with your members and send any written comments on the DRAFT Review Criteria document by close of business May 10, 2011.

Respectfully,

T.J. Galloway
NERC Chief Reliability Officer
770-542-9735

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Reliability Standards

Herb Schrayshuen
Vice President and Director of Standards

May 11, 2011
Standards Actions

- 7a Rules of Procedure Appendix 3B – **Approve**
  - Standards Committee Charter – **Approve**
- 7b Rules of Procedure Appendix 3D – **Approve**
- 7c Reliability *First* Corporation Standards Development Procedure Version 3-b – **Approve**
Requested Actions

- Approve changes to Standards Committee (SC) Election Procedure – Rules of Procedure (ROP) Appendix 3B
- Direct staff to file with regulatory authorities for approval

Key Changes (Proposed by SC Members)

- Chair and Vice Chair elected by incumbent SC members for two-year term; vacant positions filled to ensure all segments represented
  - Chair and Vice Chair do not vote (eliminates conflict of interest)
- Canadian representatives must “reside in Canada”
- Simplified process for filing SC vacancies between regular elections
Standards Committee Charter

- Changes proposed by SC

- Charter changes support changes to SC Election Procedure:
  - Officers elected from incumbent SC members; associated vacancies filled during normal SC election
  - Officers do not vote
  - Officers serve two-year term

- Shortens time for public notice of actions without a meeting from 10 to 3 days; shortens time for posting results from 10 to 5 days
Requested Actions

- Approve changes to RBB Criteria – ROP Appendix 3D
- Direct staff to file with regulatory authorities for approval

Key Changes

- Clarified that “individuals” may join as well as organizations and entities
- Added Independent System Operators to segments previously limited to Regional Transmission Operators
- Expand allowance of agents or associations to represent groups in Segments 3, 5, and 6
Key Changes

- Segment 5: Added language to include variable and other renewable resources
- Segment 6: Added a provision for demand-side management providers
- Segment 8: Clarified that the following are ineligible:
  - Individuals or entities employed by an entity registered in another segment
  - Consultants, vendors, or trade associations eligible to join another segment
  - Any individual or entity registered in another segment
Requested Actions

- Approve changes to ReliabilityFirst Corporation's Regional Standards Development Procedure
- Direct staff to file with FERC for approval

Key Changes

- Changes to align ReliabilityFirst process with NERC’s SPM:
  - Format: Adopts format for continent-wide standards
  - SAR: Added formal comment period for SAR
  - Ballots: Added recirculation ballot; changed threshold for approval from “simple majority” to “super majority”

- Added informal comment period for interpretations
- Requires compliance without penalties on effective date
Enforcement Streamlining Update
(Item 3.a.i.)
Efficient Processing of Violations

- Processing 67% more violations per month in 2011 as in 2010 (117/month vs. 70/month)
  - Increased use of Disposition Documents
  - Implementation of Administrative Citation Process
- Increased collaboration with Regional Entities on assessing risk and evaluating compliance plans
Progress of Administrative Citation Process

- To date, three orders accepting initial filings from January, February, and March
  - First order commended NERC for prompt implementation
- An average of 29 violations filed each month under a single NOP
- The goal is to reach an average of 100 violations handled through the process each month
- Processing time from discovery to FERC acceptance averages ~300 days, compared to ~675 days for non-ACP violations
### Administrative Citation Process — Regional Entity Participation (through March*)

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*Since the March ACP filing, the Regions have increased the number of identified Administrative Citation candidates.
Administrative Citation Process — What it is not

- ACP is not “fix in the field”

- Selection Criteria
  - Must be a low risk violation, fully mitigated and verified
  - Differ across regions based on internal judgments and perceived efficiency savings

- Record Obligations
  - Initial assessment of risk
  - Full record developed by Region, supplied by registered entity
Most efficiency gains are at the NERC-FERC filing step — seeking to drive benefits to all steps

- Scaling back pre-filing reviews
- Relax entry criteria? — inclusion of “moderate risk” and aggregated settlements with larger penalties
- Reconsider record expectations and verification of mitigation plan

The process is developing, and it is a step toward greater streamlining.
Other Potential Efficiency Gains Being Considered

- Fix in the field options
  - Separate Compliance from Enforcement
  - Greater discretion granted to auditors
  - Greater enforcement discretion
- Deficiency letters
- Risk-based monitoring
Update on Mitigation
(Item 3.a.ii.)
Because mitigation is key to ensuring the reliability benefits of the Compliance Enforcement program, NERC will continue to focus on mitigation activities and mitigation plan processing.

- At the request of the Committee, NERC staff reviewed the active violations in our caseload that are not yet mitigated or for which MPs have not yet been submitted.

- This review was undertaken with the Regions in March.
Current Mitigation Plan Trends

• Since our review of active violations without mitigation plans:
  - March 2011 experienced the highest number of MPs verified complete in one month (174) in at least two years
  - More than 800 MPs were submitted during the last six months
Mitigation Status

Number of Violations

Month and Year

Region Awaiting MP (A)  Entity Implementation (E)  MP Validated Complete (G)
Mitigation Plan Status by Discovery Month for Active Violations - June 2007 thru February 2011

Discovery Month / Year

- Completed
- In Progress
- No MP
Regional Comment Summary

- Reasons for Incomplete Mitigation
  - Regional assessment of facts and circumstances is not complete or NERC/Regional position on first impression issue not defined
  - Processing delayed due a substantive dispute about violation, registration or jurisdiction
  - Pending compliance investigation or FERC 1b
  - Region is working with the registered entity to develop MP prior to submittal
  - Bookending violation; no MP required
  - MP in normal process and/or data needs updating
Mitigation Plan Challenges

- CMEP does not provide a clear deadline to provide a mitigation plan
- Mitigation Plans are currently more rigorous than in the past, but mitigating activities are usually immediate although not captured in the CMEP
- Early mitigation is desirable and a stated objective of NERC and the Regions — Early submission of a mitigation plan will not be taken as an admission and will be viewed favorably in enforcement
Key Compliance Trends
(Item 3.a.iii.)
Key Compliance Trends

- Trend # 1: The number of violations received each month exceeds the total monthly violations processed
  - Monthly BOTCC approvals are increasing
  - The use of the administrative citation process should help to increase the number of violations processed
  - Supporting slides 8 and 9
Key Compliance Trends

- Trend #2: CIP 002-009 violations continue to increase as a portion of all new violations
  - Ramp up is in accordance with the implementation plans, unlike 693, but CIP steady state timing should be similar to 693
  - A tapering off has recently been exhibited as a result of all entities and all requirements moving through the implementation plans
  - Supporting slide 11
Key Compliance Trends

- Trend #3: Over 50 percent of all active violations are not yet mitigated
  - NERC and Regions working to understand unmitigated violations and ways to improve MP process
  - Supporting slides 6, 13, and 14
Trend #4: The number of violations without mitigation plans continues to rise

- The industry has been positively reacting to this observation by submitting mitigation plans earlier in the process and preparing MPs for older violations.
- Supporting slides 12 and 13
Risk Based Reliability Compliance Monitoring
(Item 3.b.i.)
- Manage resources effectively and efficiently
- Use compliance monitoring to enhance reliability
- Provide predictability for the industry to develop compliance programs
- Provide flexibility for the Regional Entities to focus efforts and react to emerging trends
CMEP Annual Plan and AML 2012

- Build on the 2011 analysis
- Consider the top reliability risk priorities
- Consider tiered approach to auditing
- Provide longer horizon for key reliability standards to be audited – predictability for compliance program management
- Continue flexibility for the Regional Entities
- Improve guidance on entity assessment
Risk and performance-based audit criteria include six components for scope identification;

- North American-wide NERC Reliability Standards most violated
- Regional Entity-specific most violated NERC Reliability Standards
- Regional Entity Reliability Standards most violated, as applicable
- Registered Entity specific issues, including but not limited to operational issues, operational footprint changes, corporate restructuring, other trends, etc.
- Random determination
- Assessment of Entities Internal Compliance Program and Compliance Culture
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</tr>
<tr>
<td>Subject to Complaint</td>
<td></td>
<td>--</td>
<td>--</td>
<td>94</td>
<td>95</td>
<td>102</td>
</tr>
</tbody>
</table>
## Applicable 693 Requirements by Year

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BA</td>
<td>61</td>
<td>137</td>
<td>107</td>
<td>175</td>
<td>95</td>
<td></td>
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<tr>
<td>GO</td>
<td>53</td>
<td>74</td>
<td>34</td>
<td>47</td>
<td>40</td>
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<tr>
<td>GOP</td>
<td>19</td>
<td>70</td>
<td>23</td>
<td>34</td>
<td>9</td>
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<tr>
<td>LSE</td>
<td>8</td>
<td>42</td>
<td>8</td>
<td>22</td>
<td>9</td>
<td></td>
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<tr>
<td>RC</td>
<td>54</td>
<td>127</td>
<td>93</td>
<td>127</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>TO</td>
<td>77</td>
<td>103</td>
<td>70</td>
<td>86</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>TP</td>
<td>49</td>
<td>83</td>
<td>51</td>
<td>86</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Avg Reqs per Function</td>
<td><strong>36</strong></td>
<td><strong>61</strong></td>
<td><strong>38</strong></td>
<td><strong>55</strong></td>
<td><strong>42</strong></td>
<td></td>
</tr>
</tbody>
</table>
Entity assessment to determine audit scope and compliance monitoring:

- Technical and Risk Profile
  - Size, functions, interconnections
- Reliability Performance
  - GADS, TADS
- Internal Compliance Program and Culture
  - Internal controls, corrective action program, self report
- Compliance History
  - Cooperation, violations, mitigation
- Regional Entity Assessment
2012 Annual Implementation Plan and Actively Monitored List

- May–June: ERO (NERC and RE) refinement
- July: Industry and FERC Review
- August 1, 2011: Posted to NERC Website
Top Reliability Issues to Inform Compliance
(Item 3.b.ii.)
Top Reliability Risk Priorities

- Mis-operations of relay and controls systems
- Human errors by field personnel
- Ambiguous, incomplete voice communications
- Right-of-way maintenance and clearances

- Changing resource mix
- Integration of new technologies
- High impact, low frequency events
Abrupt / Forced Registration Changes
(Item 3.b.iii.)
Abrupt / Forced Registration Changes

- Possible increasing trend in violations as a result of abrupt or forced registration changes:
  - Large entities no longer providing services to small entities
  - GO/GOP registered as TO/TOP
  - TOs with reliability gaps registered as TOPs
During analysis of EOP-005, System Restoration and Blackstart

- 41/130 violations or 32% resulted from abrupt/forced registration changes
- Further analysis indicated that a total of 222 violations for six entities were the result of abrupt registration changes
- Standards implicated: COM, EOP, FAC, PER, PRC, TOP, TPL, VAR
Abrupt/Forced Registration Changes

- Actions: ERO to provide a compliance bulletin
  - Entities that discontinue service should:
    - Provide subordinate entities a 180 day notification to arrange for alternative services
  - Entities subject to abrupt/forced registration changes
    - are still expected to mitigate the possible violations and become compliant
    - Notify their Region and NERC
  - Enforcement should consider where appropriate
    - Dismissal of PVs
    - Disposition via Administrative Citation Process
Compliance Application Notice Update (Item 3.b.iv.)
Process is posted:

- Comments always invited and will be considered
- Increased industry comment period to three weeks
- Posting industry comments
  - Three sets currently posted
- Identified Issues list posted

Compliance Application Notice Update

- Final/Posted – 11
- FERC/Canadian Regulators - 0
- Industry – 11 (comment period complete 6)
- Regions – 0
- NERC – 3
- Development – 15
- Identified Issues – 49 in queue

Compliance Operations Summary

- Risk based reliability compliance monitoring development efforts continue:
  - Entity risk and performance are key
  - Top risk priorities considered
  - Goal for posting 2012 plan is August 1

- Guidance on Abrupt/Forced registration changes forthcoming

- CAN process: updated, posted, productivity increasing
QUESTIONS?
Notes courtesy of Sylvain.

Thanks again Sylvain, this is very helpful and much appreciated!

Guy V. Zito  
Assistant Vice President-Standards  
Northeast Power Coordinating Council, Inc.  
1040 Avenue of the Americas, 10th Floor  
New York, NY 10018  
212-840-1070  
212-302-2782 fax

Please find attached my notes from today's MRC meeting. I will send similar notes from the BoT tomorrow.

Feel free to distribute, if you believe appropriate.

Have a good evening.
Notes, courtesy of Sylvain.

Guy V. Zito  
Assistant Vice President-Standards  
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1040 Avenue of the Americas, 10 th Floor  
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And here are my notes of Day 2. Nothing serious to report from today.

Overall,

- CANs are clearly a concern and will get more ice time in the coming months.
- ALR is the talk of town
- Better relations between FERC and NERC seem a fact

Again, feel free to distribute if you deem appropriate.
BES/ALR Policy Issues Task Force

Bill Gallagher, Task Force Chair

May 10, 2011
Should ALR address resilience to and recovery from physical and/or cyber attacks?

Should cost/benefit be factored into ALR? How and by whom should decisions be made?

Is impact of all load loss equal; e.g., load shed in response to EEA-3 vs. system disturbances?

How should “cascading” be defined?

Doe we have adequate metrics for current attributes of ALR?
Should facilities and equipment located on the distribution system be considered part of the BES based on their BES reliability function; e.g., demand response controls; UFLS; UVLS; etc.

Transition plan for newly identified facilities and elements; need for “grandfathering”?

Can responsibility for BES facilities of small entities be assigned to other entities; can JRO and CFR procedures provide for this?
Members Representative Committee
May 2011 (Agenda Items # 6, 7, and 8)

Tom Galloway
Senior Vice President and Chief Reliability Officer

May 10, 2011
Overview

- Analysis of Cold Weather Impacts
  - Summary/sequence of events
  - Analysis approach/current status/next steps
- Facility Ratings Alert Update
  - Background, current status and next steps
- Events Analysis Process Improvements
  - Background and data since October 25, 2010
  - Recent process changes
  - Field trial and other next steps
Analysis of Cold Weather Impacts
Summary: Cold Weather Impacts

- February 1-4, 2011
- Extreme cold weather impacts southern U.S.
- 4 southern regions, many separate entities
- Unusually high electrical and gas demands
- Generation: Fail to start, fail to run, derated
- Capacity shortfall
- Firm load curtailment/load shed plan
Sequence: Cold Weather Impacts

- Summer 2011 – Draft/Final reports (dates tbd)
- Mar 31 Advisory panel formed
- Mar 14 – Site visits (4 teams – FERC/NERC/Regions, 1 week each)
- Feb 28 - Added RFIs to TRE/WECC TOPs and SPP GOPs
- Feb 24 - Natural Gas Council (NGC) letter seeking coordination.
- Feb 21 – NERC CEO testifies before Senator Bingaman
- Feb 19 – Broad requests for information (RFI) issued
- Feb 18 – Routine coordination calls (weekly) commence
- Feb 11/14 – NERC/FERC announce EA/Inquiry respectively
- Week of Feb 7 – TRE and WECC commence EAs
- Feb 1-4 – Cold snap/significant unplanned generation and load loss
# Areas of Focus: Cold Weather Impacts

<table>
<thead>
<tr>
<th>FERC</th>
<th>Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>NERC Cat 4 EA</th>
<th>Bulk Power System (Electric only)</th>
<th>TRE</th>
<th>Regional EA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WECC</th>
<th>Regional EA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPP</th>
<th>Via NERC EA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SERC</th>
<th>As reqd</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Preliminary Observations

- Some lessons learned from previous, similar events not sufficiently anchored
- Revised EA process working appropriately for larger scale, complex event
- Winterization:
  - Plan deficiencies
  - Execution deficiencies
- Load shed protocols – evaluating
- Fuel supply issues – evaluating
Facility Rating Alert Update
Background

- Discussed: Nov 2010, Feb 2011 MRC meetings
- Ratings impacts from actual/field discrepancies
- Not restricted to single entity/region
- October 2010: Alert (Recommendation)
- November 2010: Alert Revised/Cauley letter
  - New assessment plan submittal date (Jan 18, 2011)
  - Three asset categories per BPS risk
  - Assessment/corrective action timelines adjusted
Current Status

- Good industry response by Jan 18 due date
- Project team formed (NERC/Regions)
  - Consistent response/treatment
  - Develop assessment plan review criteria
- Assessment Plan shortcomings observed
  - Did not prioritize facilities into high, medium, and low categories
  - No rationale for facility prioritization
  - Lacked details on how “as-built” construction conforms to the FAC ratings methodology
  - Did not conform to the Alert (Recommendation) timelines
## Assessment Plan Review Summary (as of April 30, 2011)

<table>
<thead>
<tr>
<th>Region</th>
<th>Reasonable Plan</th>
<th>Need more information</th>
<th>Plan needs rework</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRCC</td>
<td>32</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>MRO</td>
<td>13</td>
<td>26</td>
<td>3</td>
</tr>
<tr>
<td>NPCC</td>
<td>105</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td>RFC</td>
<td>89</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td>SERC</td>
<td>75</td>
<td>31</td>
<td>21</td>
</tr>
<tr>
<td>SPP</td>
<td>23</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>TRE</td>
<td>61</td>
<td>84</td>
<td>10</td>
</tr>
<tr>
<td>WECC</td>
<td>30</td>
<td>44</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>428</strong></td>
<td><strong>266</strong></td>
<td><strong>52</strong></td>
</tr>
<tr>
<td>Percent (%)</td>
<td>57</td>
<td>36</td>
<td>7</td>
</tr>
</tbody>
</table>
**Recent / Next Steps**

- April 26: Letter to Trades/Forums for input
- Notifications to entities on assessment plans
- May 12: Webinar to discuss
- Assessment plan implementation reporting
  - High priority: 7/15/11 and 1/15/12
  - Medium priority: 7/15/12 and 1/15/13
  - Low priority: 7/15/13 and 1/15/14
Presentation Outline

- Revised EA program purpose
- Key steps
- Event categories/associated actions
- Expected reporting timelines
- Event metrics
- Continued Challenges
- Field Trial 2/Next steps
Purpose of New EA Program

To ensure the reliability of the North American bulk power system

- **Analyze and understand system events**
  - Individual Events
  - Periodic review of events in aggregate to detect emerging trends and signs of decline in reliability performance

- **Determine and address actual and potential risk**
  - Categories are used to denote actual and potential risk of events and to guide associated actions
  - Response varies based on category

- **Promote ERO Enterprise as a Learning Organization**
  - *Timely distribution of Lessons Learned and other events analysis related documents*

- **Appropriate Compliance Review**
Event Analysis – Key Steps

- What happened
  - Facts, SOE

- Why it happened
  - Cause analysis

- Lessons learned
  - Entity / Region / NERC

- Gap analysis
  - Standards / Compliance gaps?

- Corrective actions
  - Specific and underlying

- Trend Analysis / Themes?
  - ERO-wide communications
Event Categorization

Prioritizes Event Analysis based on risk and significance, response is systematic and oversight/depth of analysis with the categories.

- **Cat 4/5**: Loss of large amounts of load or generation. Large unintended large system separations and Islanding.
- **Cat 2/3**: Loss of a generation stations, loss of small to medium amounts of load, unintended system separations and Islanding.
- **Cat 1**: Unintended loss of bulk power elements (Gen, transmission components, intended or controlled separations).
Event Categorization (cont.)

- Cat 0 – Promptly close, trend as needed
- Cat 1 (low) to Cat 5 (high) reliability significance
- Cat 1 events typically closed to trend
- Cat 2 and above
  - Data hold as a routine action
  - Cause analysis and corrective action
  - Lessons learned
  - Compliance evaluation expected
Event Reporting

- No existing reporting relief (OE-417, EOP-4, etc.)
- Event notification, minimal data (within 24 hrs)
- Sent to NERC Situational Awareness
- Appendix A (Event Report) for all events
  - 5 business days – Entity draft to Region/NERC
  - 5 (added) business days – Region final to NERC
    - Includes sequence of events as appropriate
  - Ongoing work with EOP-4-2 SDT & DOE
    - Consolidated/web-based reporting
Event Analysis

- Data hold and Events Analysis Report (EAR) for all Cat 2 and up
- Prepared by the impacted entity, group of impacted entities, or an event analysis team as defined in the EA process
- Addresses what happened and why
- Event analysis coordination (plan) is used for more complicated events involving broader geographic area, multiple registered entities, or complex sets of facts and circumstances
- When multiple entities are involved in an event they will collaborate with the applicable region(s) to determine if one or more EARs is appropriate
- Regions and NERC work with the entity(s) to review EA reports
- *Phase II Field Trial addressing formatting of EARs to provide for public and/or controlled release of important information while appropriately safeguarding confidential or sensitive information*
Lessons Learned

- Entity/Region prepare lesson learned using standard template.
- Entity/Region redacts entity specifics and any other event details that are confidential or otherwise sensitive.
- Region securely transfer the draft lesson learned to NERC.
- NERC staff adds lesson learned to master list, prioritizes lessons learned and identify common themes.
- NERC staff distributes priority draft lessons learned to EAWG for discussion / review during upcoming meetings. Submitting Region or NERC staff leads the EAWG discussion/review.
- NERC will posts finalized lessons learned to the NERC web site notifies the industry.
- *Lessons learned to be proactively shared in various forums.*
Entities should establish a liaison between internal event analysis and compliance functions as part of the event analysis process.

Entities are expected to perform thorough compliance analyses and to develop a compliance self-assessment report proportional to the severity of the event/risk to the BPS.

Compliance self-assessment reports encouraged for Category 1 and above with submittal to applicable region for Category 2 and above.
Compliance Interface

- Compliance self-assessments (App G template) to include:
  - List of all applicable standard requirements potentially implicated by the event
  - Written narrative/conclusion describing impact of event relative to cited reqts
  - Identification of any potential gaps in existing standards revealed by the event
  - Self-report of any possible violations through the existing CMEP procedures
  - Entity cooperation and timeliness regarding self-analysis and identification of corrective actions, development of any lessons learned, and self-reporting of possible violations will be afforded significant credit during possible enforcement
## Process Timing Elements

<table>
<thead>
<tr>
<th>Event Category</th>
<th>Brief Report (Bus days)</th>
<th>Lessons Learned</th>
<th>Event Analysis Report</th>
<th>Compl. Self Assessment</th>
<th>Closure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Draft 5 days Final 10 days</td>
<td>&lt; 15 days</td>
<td>NA (typically)</td>
<td>Encouraged Submittal not required</td>
<td>10 days after final (brief) report</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>&lt; 30 days</td>
<td>30 days</td>
<td>Initial list &lt; 20 Final &lt;60 after brief</td>
<td>30 days after EAR</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>&lt; 30 days</td>
<td>60 days</td>
<td>Final &lt; 90</td>
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<tr>
<td>4</td>
<td></td>
<td>&lt; 60 days</td>
<td>120 days</td>
<td>Final &lt; 150</td>
<td>60 days after EAR</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>&lt; 60 days</td>
<td>120 days</td>
<td>Final &lt; 150</td>
<td></td>
</tr>
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</table>
Events/Category/Region

Events 10/25/10-4/25/11

- Cat 5
- Cat 4
- Cat 3
- Cat 2
- Cat 1
- Cat 0

FRCC  MRO  NPCC  RFC  SERC  SPP  TRE  WECC
Candidate Lessons Learned (by Region)

46 Candidate Lessons Learned from 116 “Qualifying” Events (10/25/10-4/25/11)
<table>
<thead>
<tr>
<th>Region</th>
<th>Lessons Learned Brief Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRCC</td>
<td>Plant startup procedures did not include signoff for positioning of some ancillary systems such as control air, contributing to plant trip</td>
</tr>
<tr>
<td>FRCC</td>
<td>Gas pressure regulating valve sensing line froze due to failed heater. Resultant erratic gas pressures led to unit trip.</td>
</tr>
<tr>
<td>MRO</td>
<td>Length of time required to implement some software changes necessitates use of change control procedures to periodically confirm functionality</td>
</tr>
<tr>
<td>NPCC</td>
<td>(+) Potential best practice for routine backup facility drills and SCADA throwover</td>
</tr>
<tr>
<td>NPCC</td>
<td>Annual updating of personal contact information just prior to annual drill proved inadequate, necessitating more frequent updates.</td>
</tr>
<tr>
<td>NPCC</td>
<td>Difficulties were encountered logging into main network from backup facility terminals. Some cable access used for weather monitoring were not functional</td>
</tr>
<tr>
<td>NPCC</td>
<td>Correlation of discharge temperatures to unanticipated fish runs</td>
</tr>
<tr>
<td>Region</td>
<td>Lessons Learned Brief Description</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>NPCC</td>
<td>Lack of telemetry to denote gas valve status contributed to a generating plant trip. A gas isolation valve was closed without proper notification. Closure was not identified early enough to preclude the trip.</td>
</tr>
<tr>
<td>NPCC</td>
<td>Multiple unit gas generation sites supplied by a single gas source should be reviewed and evaluated to ensure that the minimum gas pressure settings for each individual unit are staggered to prevent the simultaneous loss of all units at the same pressure level.</td>
</tr>
<tr>
<td>NPCC</td>
<td>ACE failed to restore within required timeframes following dual unit trip. Lessons learned included system dispatch, use of electronic dispatch equipment, and establishing regional operating procedures.</td>
</tr>
<tr>
<td>RFC</td>
<td>4 degrees Celsius appears to be relevant to fish runs. When rapid water temperature changes occur through this range, potential for fish runs increases as certain non-native fish species become entrapped.</td>
</tr>
<tr>
<td>RFC</td>
<td>Zebra muscles had plugged several of the screen wash nozzles which contributed to overloading the screens.</td>
</tr>
<tr>
<td>SERC</td>
<td>More robust load forecasting is needed on some load pocket areas.</td>
</tr>
<tr>
<td>TRE</td>
<td>Lean combustion blowout is a known characteristic of certain combustion turbines due to their lean fuel/air mixture design.</td>
</tr>
<tr>
<td>Region</td>
<td>Lessons Learned Brief Description</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>TRE</td>
<td>Drivetrain oscillation resulted in generation trips due to issues with a turbine firmware upgrade. Entity has identified and corrected the cause by reverting to the previous version of the firmware.</td>
</tr>
<tr>
<td>TRE</td>
<td>Approximately 75% of the trips addressed in this response to the regional requests for information are attributed to either design issues or improper workmanship. These lessons learned should be incorporated into improved contract language stipulating tighter quality control processes and higher levels of unit performance during commissioning.</td>
</tr>
<tr>
<td>WECC</td>
<td>A new design did not work as intended when there is a second ground cable tied to the ground mat. Entity did not anticipate the external ground fault current flows through this parallel path of the ground mat to be as high as the currents we experienced during this event.</td>
</tr>
<tr>
<td>WECC</td>
<td>A significant capital project involved extensive 345 kilovolt line additions or re-terminations with associated protection and control equipment additions. During the installation testing, entities determined protection and control equipment was properly installed and set. However, noise levels during fault conditions created unforeseen communication logic impacts causing an over trip for an external fault. Entity worked with the equipment manufacturer to modify the software applied to the power line carrier communication equipment to make it less susceptible to noise created during fault conditions on the grid.</td>
</tr>
</tbody>
</table>
Lessons Learned - Themes

Cross Cutting Lessons Learned

46 Lessons Learned Submitted since Start of the Field Trial
Oct 25, 2010 - April 25, 2011

- Communication: 20%
- Generator Cooling: 14%
- Maintenance: 23%
- Commissioning: 8%
- Generator: 8%
- Plans and Procedures: 9%
- Tool Testing: 9%
- Training: 9%
- Other: 27%
Areas of Continued Challenge

- Throughput/automation – all aspects
- Closure (timely)
- Standardized cause analysis techniques
- Consolidate reporting form(s)
- Consistent understanding / execution
- Resource deployment
- Consideration of CIP “events”
- EA/compliance interface
Recent/Next Steps

- 2\textsuperscript{nd} Revision finalized April 8, 2011
- Webinars (April 11 and 26)
- Phase 2 Field Trial – May 2nd
  - Three-month run (nominal)
  - Accrue added improvement opportunities
  - Issue another process document revision by October 1, 2011
  - Address CIP related events
- Enabling Rules of Procedure changes – November Board of Trustees
QUESTIONS?
ERO Enterprise Performance Metrics

Dave Nevius, Senior Vice President
Mark Lauby, Vice President and Director of Reliability Assessment and Performance Analysis

May 10, 2011
Overview of Metrics Initiatives

- Two interrelated components:
  - System Reliability Performance
  - NERC and Regional Entity Organizational Performance (RDAs)

- Used to benchmark and improve performance
- Provide context for assessing success of overall ERO Enterprise
### ERO Enterprise Value Propositions and Sample Performance Metrics

<table>
<thead>
<tr>
<th>Stakeholder Values</th>
<th>Reliability Improvement</th>
<th>Culture of Learning</th>
<th>Respected, Trusted and Accountable</th>
<th>Effective Enforcement Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPS and Process Performance Metrics</td>
<td>Major event risk</td>
<td>% Self-reports of violations</td>
<td>Quality of standards</td>
<td>Correctness of entity registration</td>
</tr>
<tr>
<td></td>
<td>ALR metrics</td>
<td>Event analysis reports timely completed/posted</td>
<td>Timeliness of standards</td>
<td>Quality of audits</td>
</tr>
<tr>
<td></td>
<td>Time to mitigate violations</td>
<td>Trend analyses from availability data bases</td>
<td>% Results-based standards</td>
<td>Caseload index</td>
</tr>
<tr>
<td></td>
<td>Unmitigated violations</td>
<td>Benefits of Lessons Learned</td>
<td>Quality/timeliness of Regional Assessments</td>
<td>Enforcement actions remanded</td>
</tr>
</tbody>
</table>

**Enterprise Core Values**

*Transparency – Efficiency – Consistency – Effectiveness – Quality*
Integrated Risk Assessment

Event Driven
Severity Risk Index (SRI)
Measures Risk from System Events

Condition Driven
Portfolio of Reliability Indicators
Seasonal & LTRA
Monitoring Risk from System Conditions

Standards/Statute Driven
Violation Risk Index (VRI)
Measures Risks from Known Unmitigated Violations

Cornerstone of risk-management concepts

Severity

Avoid
High Impact Low Frequency (including CIP)
Learn and Reduce
Inverse Cost-Benefit
Reporting Threshold

Frequency
Severity Risk Index (SRI) and EA Category

NERC Annual Daily Severity Risk Index (SRI)
Sorted Descending with Historic Benchmark Days

Avoid or Increase Resilience

Learn and Reduce

Event
Category 5
SRI 12 +

Category 4
SRI 7-12

Category 3
SRI 4-7

Category 2
SRI 2-4

Category 1
SRI 1-2

2008 2009 2010 Historic Benchmark Days

Descending Day of The Year
Event Driven Index (EDI)

- Focus on significant events and quantify the inherent system risk using historic outage and event data
  - Use the risk value associated with SRI
  - GADS and TADS daily outages
  - MW load loss and restoration duration from disturbance event reports

- OC/PC endorsed
  - Concepts and framework in September 2010
  - Calculation formula in March 2011
Standards/Statute Driven Index (SDI)

- 26 standard requirements
- Severe Reliability Impact Statement (RIS)
  - RIS indicates significance of impact on BPS (slide 19)
- Violation Risk Factor (VRF)
- Violation Severity Level (VSL)
- Standard applicability used as exposure (denominator)
- Similar to daily SRI calculation
**Condition Driven Index (CDI)**

- **ALR1-5**  –  System Voltage Performance
- **ALR1-12**  –  Interconnection Frequency Response
- **ALR2-5**  –  Disturbance Control Standard (DCS) events greater than Most Severe Single Contingency (MSSC)
- **ALR3-5**  –  IROL/SOL Exceedance (less than 30 minutes)
- **ALR4-1**  –  Protection System Misoperation
- **ALR6-2**  –  Energy Emergency Alert 3

No data available yet for ALR1-5, ALR1-12, ALR3-5, and ALR4-1

Assumed CDI = 99.80
Integrated Reliability Index (IRI) Concept

- Bulk Power System Integrated Reliability Index (IRI)
  - **Event Driven Index (EDI):** Use the risk value associated with the severity risk index (SRI)
  - **Condition Driven Index (CDI):** Use a subset of metrics based on selection criteria
  - **Standards/Statute Driven Index (SDI):** Identify a subset of standards that have highest impact to reliability and create an index of standards violations
IRI Trend (2008-2010 by Quarter)
Next Steps

- Seek feedback from:
  - Compliance groups (CCC or PMTF) on SDI
  - OC/PC in June 2011

- Target OC/PC approval in September 2011
RDA Metrics

- Measure NERC and RE performance under RDAs, Rules of Procedure, and applicable regulations
  - Compliance Registration
  - Compliance Audits
  - Enforcement
  - Mitigation of Compliance Violations
  - Event Analysis
  - Reliability Standards/Regional Standards
  - Reliability Assessment
RDA Metrics

- One metric and at least one measure for each topic
- Linked to ERO Strategic Goals/Objectives
- Initial set of RDA metrics for approval in August
- Used in annual review of strategic goals and objectives and to inform budget process
- Welcome MRC comments and suggestions
NERC 2012 Business Plan and Budget

- Budget planning background
- Goals, challenges, and key resource drivers
- 2012 resource and financial projections
- Remaining steps and schedule
- Questions and answers
In 2010 initiated a multiyear business planning and budgeting process

- Longer term goals and assumptions
- 3 year budget projections

2012 budget projections remain on track

2012 is midpoint in first cycle

2012 goals and deliverables updated to reflect prioritized reliability focus, stakeholder feedback
Strategic Goals

- Develop clear, results-based standards
- Promote culture of industry learning and reliability excellence
- Provide effective measures of reliability risk and performance
- Facilitate effective management of critical infrastructure risks
- Ensure effective and timely compliance enforcement and mitigation
- Provide an efficient and effective ERO enterprise
- Instill high degree of trust and confidence in the ERO
Significant Challenges

- Reprioritizing to focus on reliability risk and delivery of results
- Rising expectations in critical infrastructure
- Addressing regulatory mandates
- Improving business processes while maintaining focus on significant workload
- Balancing resource needs within financial constraints, and achieving efficiencies
- Recruiting, integrating, and retaining qualified personnel while managing significant workload
Business Planning Framework

- Development of common assumptions
- Review existing resource needs and operating costs
- Project 2012 expenses and fixed assets taking into account projected 2011 yearend staffing and known operating cost information
- Identify 2012 incremental resource requirements and costs
- Develop projections for 2013-2014
Highest Priorities for 2012

- Issuing new and revised standards, including development of results-based standards
- Continuing to improve enforcement efficiency, productivity, leading to increased transparency
- Improving and issuing more event analysis and emerging issues reports and lessons learned
- Encouraging additional self-reporting and timely mitigation
- Improved compliance information and education
Highest Priority Items for 2012

- Improving the ability of industry to respond to incidents, vulnerabilities and threats
- Addressing reliability effects of GMD
- Improving reliability performance metrics and modeling capabilities
- Continuing SAFNR and NASPI initiatives
- Improved training of ERO staff and stakeholders
- Developing and implementing improvements to ERO processes
Key Resource Drivers

Standards

- Increased throughput of standards
  - Expectations of FERC, standards committee and industry
  - Three-Year ERO Performance Assessment recommendations
  - Prioritized three-year standards development plan
  - Reducing backlog of FERC directives
- Deliver key standards such as CIP, system protection and control standards
- Pilot a trial compliance program for roll out of standards
- Enhance standards supporting materials and references
- Improve quality of drafting, training, and communications
- Reduce use of outside contractors and consultants
Key Resource Drivers

Compliance Operations

- Risk-based Regional Entity audits and audit practices
- Compliance transparency, consistency, best practices
- Standards development and implementation support
- Improved registration processes

Enforcement

- Enhance efficiency/productivity processing violations
- Timely mitigation of risk from active violations
- Advance administrative citation process and other streamlining measures, options to increase discretion
Key Resource Drivers

Reliability Assessment and Performance Analysis

- Evaluate the reliability effects of GMD
- Advance Spare Equipment Database
- Benchmark centralized database for assessments
- Resource adequacy probabilistic assessment
- Various modeling improvement initiatives
- GADs programming support
- Metrics and reliability dashboard
Key Resource Drivers

Events Analysis
- Expand events analysis program and lessons learned

Situation Awareness
- Advancement of NASPI and SAFNR
  - NASPI funding more reflective of 2011 actual experience and leverages off of DOE and consortium funding for gateway development
  - SAFNR at a reduced level from projected 2011 spend and reflective of contractual commitments
Key Resource Drivers

Critical Infrastructure Protection

- ES-ISAC- technology licensing and maintenance support for secure portal to communicate with industry and governmental authorities
- Cyber security CIP analytical support
- NIST/DOE/NERC cyber risk management project-industry outreach and training
- Internet monitoring-analytical tools to identify cyber attack trends affecting electric sector
- DHS cyber storm exercise and cyber risk preparedness
Key Resource Drivers

Training
- Expand reliability training and education delivery
- Initiate e-library of reliability resources

Process Improvements
- Design and deployment IT infrastructure to assist NERC in implementing business processes improvements

Legal and Regulatory
- Resources needed primarily to support standards and compliance program areas initiatives
Highlights of 2012 Projection

- Projected $1M (2%) increase in cost of current operations
- Projected new funding of $6.8M
- No additional working capital funding currently contemplated
- 16% overall increase in operating costs and capital expenditures
- 1.8% below forecast in 2011 three-year plan
### Changes in Costs of Existing Operations

<table>
<thead>
<tr>
<th>2011 Base Operating Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 21,095,939</td>
</tr>
<tr>
<td>1,285,299</td>
</tr>
<tr>
<td>3,263,692</td>
</tr>
<tr>
<td>2,977,801</td>
</tr>
<tr>
<td>$ 28,622,731</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2012 projected change in base operating budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 1,435,532</td>
</tr>
<tr>
<td>88,401</td>
</tr>
<tr>
<td>(339,641)</td>
</tr>
<tr>
<td>179,356</td>
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</table>

<table>
<thead>
<tr>
<th>Total Personnel Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 28,622,731</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Meeting Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 861,500</td>
</tr>
<tr>
<td>2,635,536</td>
</tr>
<tr>
<td>227,800</td>
</tr>
<tr>
<td>$ 3,724,836</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Meeting Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 3,724,836</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consultants and Contracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 7,137,042</td>
</tr>
<tr>
<td>300,094</td>
</tr>
<tr>
<td>1,901,580</td>
</tr>
<tr>
<td>$ 9,338,716</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contracts and Consultants</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 7,137,042</td>
</tr>
<tr>
<td>300,094</td>
</tr>
<tr>
<td>1,901,580</td>
</tr>
<tr>
<td>$ 9,338,716</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 1,020,151</td>
</tr>
<tr>
<td>2,420,176</td>
</tr>
<tr>
<td>1,959,854</td>
</tr>
<tr>
<td>4,000</td>
</tr>
<tr>
<td>$ 5,404,182</td>
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</table>

<table>
<thead>
<tr>
<th>Non-Operating Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 750,000</td>
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<table>
<thead>
<tr>
<th>Capital Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 845,200</td>
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<tr>
<td>40,800</td>
</tr>
<tr>
<td>$ 886,000</td>
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</table>

<table>
<thead>
<tr>
<th>Total Base Operating Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 48,726,465</td>
</tr>
</tbody>
</table>
# 2012 Incremental Resource Requirements and Costs

## Projected 2012 Base Operating Budget

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Salaries</td>
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<td>Benefits</td>
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<td>Retirement</td>
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<tr>
<td>Meetings</td>
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<tr>
<td>Travel</td>
<td>$250,000</td>
</tr>
<tr>
<td>Conference Calls</td>
<td>$-</td>
</tr>
<tr>
<td><strong>Total Meeting Expense</strong></td>
<td><strong>$250,000</strong></td>
</tr>
<tr>
<td>Consultants and Contracts</td>
<td>$1,845,000</td>
</tr>
<tr>
<td>NERCnet Contract</td>
<td>$-</td>
</tr>
<tr>
<td>IDC Contract</td>
<td>$-</td>
</tr>
<tr>
<td><strong>Contracts and Consultants</strong></td>
<td><strong>$1,845,000</strong></td>
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<tr>
<td>Office Rent</td>
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<tr>
<td>Office Costs</td>
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<td>Professional Services</td>
<td>$-</td>
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<tr>
<td>Miscellaneous</td>
<td>$-</td>
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<tr>
<td><strong>Operating Expenses</strong></td>
<td><strong>$36,225</strong></td>
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<tr>
<td>Computer &amp; Software CapEx</td>
<td>$108,000</td>
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<tr>
<td>Network Equipment</td>
<td>$-</td>
</tr>
<tr>
<td>Furniture &amp; Fixtures</td>
<td>$-</td>
</tr>
<tr>
<td><strong>Capital Expenditures</strong></td>
<td><strong>$108,000</strong></td>
</tr>
<tr>
<td><strong>Total Base Operating Budget</strong></td>
<td><strong>$6,845,265</strong></td>
</tr>
</tbody>
</table>
## Total Projected 2012 Budget Increase

<table>
<thead>
<tr>
<th>2011 Base Operating Budget</th>
<th>Total Projected 2012 Increase over 2011 Budgeted Expenses and Capital Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 21,095,939</td>
<td>$ 4,936,207</td>
</tr>
<tr>
<td>1,285,299</td>
<td>302,137</td>
</tr>
<tr>
<td>3,263,692</td>
<td>56,490</td>
</tr>
<tr>
<td>2,977,801</td>
<td>674,854</td>
</tr>
<tr>
<td><strong>$ 28,622,731</strong></td>
<td><strong>$ 5,969,688</strong></td>
</tr>
<tr>
<td>$ 861,500</td>
<td>$ (70,500)</td>
</tr>
<tr>
<td>2,635,536</td>
<td>250,000</td>
</tr>
<tr>
<td>227,800</td>
<td>150,110</td>
</tr>
<tr>
<td><strong>$ 3,724,836</strong></td>
<td><strong>$ 329,610</strong></td>
</tr>
<tr>
<td>$ 7,137,042</td>
<td>$ 700,958</td>
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<tr>
<td>300,094</td>
<td>-</td>
</tr>
<tr>
<td>1,901,580</td>
<td>(5,869)</td>
</tr>
<tr>
<td><strong>$ 9,338,716</strong></td>
<td><strong>$ 695,089</strong></td>
</tr>
<tr>
<td>$ 1,020,151</td>
<td>$ 1,284,106</td>
</tr>
<tr>
<td>2,420,176</td>
<td>418,643</td>
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<tr>
<td>1,959,854</td>
<td>45,146</td>
</tr>
<tr>
<td>4,000</td>
<td>22,200</td>
</tr>
<tr>
<td><strong>$ 5,404,182</strong></td>
<td><strong>$ 1,770,095</strong></td>
</tr>
<tr>
<td>$ 750,000</td>
<td><strong>$ (750,000)</strong></td>
</tr>
<tr>
<td>$ 845,200</td>
<td>$ (73,110)</td>
</tr>
<tr>
<td>40,800</td>
<td>(40,800)</td>
</tr>
<tr>
<td><strong>$ 886,000</strong></td>
<td><strong>$ (113,910)</strong></td>
</tr>
<tr>
<td><strong>$ 48,726,465</strong></td>
<td><strong>$ (113,910)</strong></td>
</tr>
<tr>
<td><strong>$ 53,726,465</strong></td>
<td><strong>$ 2,900,571</strong></td>
</tr>
</tbody>
</table>

### Reductions in Other Sources of Funding
- Working Capital Reserve Funding: $(5,000,000)
- Penalty Sanctions: -
## Total Projected 2012 Staffing by Program Area

<table>
<thead>
<tr>
<th>Total FTE's by Program Area</th>
<th>Budget 2011</th>
<th>Change from 2011 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operational Programs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reliability Standards</td>
<td>20.08</td>
<td>4.17</td>
</tr>
<tr>
<td>Compliance and Organization Registration and Cert</td>
<td>47.08</td>
<td>10.42</td>
</tr>
<tr>
<td>Training and Education</td>
<td>6.25</td>
<td>0.50</td>
</tr>
<tr>
<td>Reliability Assessment and Performance Analysis</td>
<td>13.75</td>
<td>2.75</td>
</tr>
<tr>
<td>Situation Awareness and Infrastructure Security</td>
<td>25.83</td>
<td>(0.33)</td>
</tr>
<tr>
<td><strong>Total FTEs Operational Programs</strong></td>
<td><strong>113.00</strong></td>
<td><strong>17.51</strong></td>
</tr>
<tr>
<td><strong>Administrative Programs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Committees and Member Forums</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>General &amp; Administrative</td>
<td>7.00</td>
<td>(0.25)</td>
</tr>
<tr>
<td>Legal and Regulatory</td>
<td>8.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Information Technology</td>
<td>10.75</td>
<td>1.75</td>
</tr>
<tr>
<td>Human Resources</td>
<td>5.50</td>
<td>0.50</td>
</tr>
<tr>
<td>Finance and Accounting</td>
<td>6.50</td>
<td>3.50</td>
</tr>
<tr>
<td><strong>Total FTEs Administrative Programs</strong></td>
<td><strong>37.75</strong></td>
<td><strong>10.50</strong></td>
</tr>
<tr>
<td><strong>Total FTEs</strong></td>
<td><strong>150.75</strong></td>
<td><strong>28.01</strong></td>
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</table>
Comparison of Projected 2012 Budget to 2011 Business Plan

<table>
<thead>
<tr>
<th>Estimated 2012 per 2011 BP&amp;B</th>
<th>Total Projected 2012 Budget</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>25,188,131</td>
<td>26,032,146</td>
</tr>
<tr>
<td>Payroll Taxes</td>
<td>1,534,622</td>
<td>1,587,437</td>
</tr>
<tr>
<td>Benefits</td>
<td>3,753,246</td>
<td>3,320,182</td>
</tr>
<tr>
<td>Retirement</td>
<td>3,555,435</td>
<td>3,652,655</td>
</tr>
<tr>
<td><strong>Total Personnel Expense</strong></td>
<td><strong>$ 34,031,433</strong></td>
<td><strong>34,592,419</strong></td>
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<tr>
<td>Meetings</td>
<td>861,500</td>
<td>791,000</td>
</tr>
<tr>
<td>Travel</td>
<td>2,905,124</td>
<td>2,885,536</td>
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<tr>
<td>Conference Calls</td>
<td>264,067</td>
<td>377,910</td>
</tr>
<tr>
<td><strong>Total Meeting Expense</strong></td>
<td><strong>$ 4,030,691</strong></td>
<td><strong>4,054,446</strong></td>
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<tr>
<td>Consultants and Contracts</td>
<td>7,137,042</td>
<td>7,838,000</td>
</tr>
<tr>
<td>NERCnet Contract</td>
<td>300,094</td>
<td>300,094</td>
</tr>
<tr>
<td>IDC Contract</td>
<td>1,901,580</td>
<td>1,895,711</td>
</tr>
<tr>
<td><strong>Contracts and Consultants</strong></td>
<td><strong>$ 9,338,716</strong></td>
<td><strong>10,033,805</strong></td>
</tr>
<tr>
<td>Office Rent</td>
<td>3,032,342</td>
<td>2,304,257</td>
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<tr>
<td>Office Costs</td>
<td>3,767,850</td>
<td>2,838,819</td>
</tr>
<tr>
<td>Professional Services</td>
<td>1,959,854</td>
<td>2,005,000</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>15,000</td>
<td>26,200</td>
</tr>
<tr>
<td><strong>Operating Expenses</strong></td>
<td><strong>$ 8,775,047</strong></td>
<td><strong>7,174,277</strong></td>
</tr>
<tr>
<td>Non-Operating Expenses</td>
<td>$</td>
<td>-</td>
</tr>
<tr>
<td>Computer &amp; Software CapEx</td>
<td>945,200</td>
<td>772,090</td>
</tr>
<tr>
<td>Network Equipment</td>
<td>40,800</td>
<td>-</td>
</tr>
<tr>
<td>Furniture &amp; Fixtures</td>
<td>500,000</td>
<td>-</td>
</tr>
<tr>
<td><strong>Capital Expenditures</strong></td>
<td><strong>$ 1,486,000</strong></td>
<td><strong>772,090</strong></td>
</tr>
<tr>
<td><strong>Total Base Operating Budget</strong></td>
<td><strong>$ 57,661,888</strong></td>
<td><strong>56,627,037</strong></td>
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</table>
Recap of Cost Increases and Funding Requirements

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Operations</td>
<td>$1,055,307</td>
<td>2.2%</td>
</tr>
<tr>
<td>Proposed 2012 Resource additions</td>
<td>$6,845,265</td>
<td>14.0%</td>
</tr>
<tr>
<td>Working Capital</td>
<td>$(5,000,000)</td>
<td>-10.3%</td>
</tr>
<tr>
<td>Total Funding Requirement</td>
<td>$2,900,571</td>
<td>6.0%</td>
</tr>
</tbody>
</table>

Increase in 2012 Assessment (Preliminary)

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due to current operations (includes working capital)</td>
<td>$(3,944,693)</td>
<td>-9.6%</td>
</tr>
<tr>
<td>Due to proposed resource additions</td>
<td>$6,845,265</td>
<td>16.7%</td>
</tr>
<tr>
<td>Total</td>
<td>$2,900,572</td>
<td>7.1%</td>
</tr>
<tr>
<td>Due to loss of penalty offset in 2011 budget</td>
<td>$10,175,000</td>
<td>24.8%</td>
</tr>
<tr>
<td>Total</td>
<td>$13,075,572</td>
<td>31.8% *</td>
</tr>
</tbody>
</table>

*NOTE: The % increase in assessments for Canadian entities will be less and higher for US entities to account for the loss of penalty offset.
Next Steps — Schedule

- **May 9** — Draft 1 of Regional Entity BP&Bs posted on NERC website
- **May 10** — Presentation of Draft 1 of NERC 2012 BP&B at end of Member Representatives Committee meeting
- **May 11** — BOT Meeting - FAC report on BP&B process as part of committee report
- **May 20** — Stakeholder comments on first draft due
- **May 27** — NERC posts second draft of BP&B
  - Will include 3 year projections
Next Steps — Schedule

- **June 2** — FAC conference call to discuss Draft 1 of Regional Entity BP&Bs
- **June 24** — Comments due on second draft of BP&B
- **July 19** — FAC meeting to review second draft of NERC BP&B, and proposed final Regional Entity BP&Bs
- **August 3** — FAC meeting to approve final NERC, Regional Entity BP&Bs and assessments
- **August 4** — Board of Trustees meeting to approve final NERC BP&B, Regional Entity BP&Bs and assessments
- **August 24** — Submit ERO BP&B and assessments to FERC for approval and file with Canadian authorities
DISCUSSION
Posted: Presentations for May 10-11, 2011 Meetings

Standards Oversight and Technology Committee Presentations

Member Representatives Committee Presentations

Compliance Committee Presentations

Board of Trustees Presentation

Tina McClellan
Executive Assistant
North American Electric Reliability Corporation
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Princeton, NJ 08540
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Tina.Mcclellan@nerc.net

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# 2011 Standards Delivery Status

<table>
<thead>
<tr>
<th>Rank</th>
<th>Project</th>
<th>Est to BOT*</th>
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<tbody>
<tr>
<td>13</td>
<td>Project 2006-06 Reliability Coordination</td>
<td>COMPLETE Q4</td>
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<td></td>
<td>- Project 2007-04 Certifying System Operators</td>
<td>COMPLETE Q1</td>
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<td>15</td>
<td>Project 2007-07 Vegetation Management</td>
<td>STRETCH Q1 2012</td>
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<td>Project 2007-17 Protection System Maintenance &amp; Testing</td>
<td>STRETCH Q1 2012</td>
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<td>11</td>
<td>Project 2009-01 Disturbance and Sabotage Reporting</td>
<td>STRETCH Q1 2012</td>
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<td>- Project 2009-06 Facility Ratings</td>
<td>TARGET Q2</td>
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<td>- Project 2010-11 TPL Table 1 Footnote B</td>
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<td>- Project 2010-13 Relay Loadability Order Phase 1</td>
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<td>- Project 2010-15 Remote Access Urgent Action</td>
<td>STRETCH Q3</td>
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<td>8</td>
<td>Project 2010-17 Definition of Bulk Electric System</td>
<td>STRETCH Q1 2012</td>
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</table>

**Completed to Date**

- 5

**Targeted for 2011**

- 9

**TOTAL COMPLETED AND TARGETED FOR 2011**

- 14

Stretch Deliveries (Estimated for Q1 2012)

- 11

**TOTAL INCLUDING STRETCH**

- 24
Project Forecast
Expected Delivery in 2012

- 2009-01 Disturbance and Sabotage Reporting
- 2006-02 Assess Transmission and Future Needs
- 2007-03 Real-time Transmission Operations
- 2010-17 Definition of Bulk Electric System
- 2007-02 Operating Personnel Communication Protocols
- 2007-17 Protection System Maintenance and Testing
- 2010-05 Protection Systems
- 2007-12 Frequency Response
- 2008-06 Cyber Security - Order 706

Based on 2011 RSDP and Prioritization

May 4, 2011
Project Forecast
Expected Delivery in 2013

- 2007-09 Generator Verification
- 2007-06 System Protection Coordination
- 2007-11 Disturbance Monitoring
- 2010-14 Balancing Authority Reliability-based Controls
- 2008-12 Coordinate Interchange Standards
- 2009-03 Emergency Operations
- 2010-13 Relay Loadability Order 733 Phase 2
- 2010-07 Generator Requirements at the Transmission Interface

Based on 2011 RSDP and Prioritization
Project Forecast
Expected Delivery in 2014

- 2009-04 Phasor Measurements
- 2008-02 Undervoltage Load Shedding
- 2008-01 Voltage and Reactive Planning and Control
- 2010-01 Support Personnel Training
- 2009-07 Reliability of Protection Systems
- 2009-02 Real-time Reliability Monitoring and Analysis Capabilities

Based on 2011 RSDP and Prioritization
Project Forecast
Expected Delivery in 2015 and Beyond

- 2010-08 Functional Model Glossary Revisions
- 2012-02 Physical Protection
- 2010-02 Connecting New Facilities o the Grid
- 2012-01 Equipment Monitoring and Diagnostic Devices
- 2010-04 Demand Data
- 2010-03 Modeling Data

Based on 2011 RSDP and Prioritization
All Directive Analysis (as of April 26, 2011)
Summary of Differences Between Previous Analysis and Current Analysis

- “All Directives” include directives from 44 Orders issued 2007 through 2010
- Coordination effort with FERC staff to date
- The project prioritization process has been incorporated (affects forecast numbers)
Standards Committee (SC) Actions

- Approved interpretation procedure including:
  - Increased transparency – now require interpretation drafting teams (IDTs) to post agendas, notes, rosters
  - Formal appointment of IDTs
  - Quality review before formal comment periods
- Implemented guidelines for IDTs
- Reviewed outstanding interpretations against new criteria
- Directed formation of permanent CIP IDT
Twenty Pending Interpretation Requests

- Twelve valid and in various stages of development
  - Proceeding as time permits; highest priority to CIP interpretations
  - Some cannot be addressed without clarification on “Strict Construction”
  - Asking to accept processing as CANs where practical
- Five accepted prior to 2009 BOT advice don’t meet criteria for acceptance
  - Notifying requesters interpretations not proceeding
- Three addressed through permanent changes to standard
  - Notifying requesters interpretations not proceeding; recommending CANs in interim
Requested Refinement to Policy Guidance

- What is scope of “Strict construction”?
  - Just requirements or whole standard?
  - Documents approved with standard?
  - Documents leading to development of standard?
Alternative to Interpretations

- Current process requires significant resources to provide stakeholders with the “binding” clarity they seek

- Seeking alternative that will:
  - Provide timely, reliable clarity for stakeholders
  - Be more efficient than current process
  - Meet NERC’s ERO responsibilities

- CANs addressing some questions
Reliability Tools Update

Lynn P. Costantini
Vice President and Chief Information Officer

May 10, 2011
SAFNR II: Situation Awareness for FERC, NERC, and the Regions
SAFNR II: Key Milestones

- Open bid period closed – December 2010
- Contract signed – March 28, 2011
  - Smart Cloud, PowerWorld, InStep Software
- Phase 1 Delivery – August 1, 2011
- Phase 2 Delivery – February 2012
SAFNR II: Key Project Participants

- NERC Project Manager
- SAFNR Project Team
- Reliability Coordinator Working Group (RCWG)
- Reliability Coordinators’ Technical Point-of-Contacts
SAFNR II: Phase 1 Critical Path Activities

- NERCnet Access/Telecommunications
- ICCP Data Point Mapping/Acquisition
- Displays Development and Testing
- Training
IDC: Interchange Distribution Calculator
NERC and OATI outlined alternative funding mechanisms late last fall and continued developing ideas throughout the winter.

NERC staff presented the list of alternatives to the Reliability Coordinator Working Group for further consideration in May.

NERC staff will provide an update to the Operating Committee in June.
Goal is to complete the transition by March 2013

- Transition approach decided by affected Reliability Coordinators and OATI
- Transition plan developed and executed by Reliability Coordinators, OATI, and NERC
Draft 2012 IT Business Plan and Budget

Lynn Costantini
Vice President and Chief Information Officer

May 10, 2011
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<th>2012 Total (draft) IT-Related Budget</th>
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<td>Standards (Balloting)</td>
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Introductions and Chairman’s Remarks

Commissioner Moeller is here to listen and is happy about the trend on reliability.

Commissioner Lafleur says she tried to attend as many of these meetings as possible. She is thrilled to be able to participate in these meetings. This is where we see what the committees are working on. The relationship between FERC and NERC is improving.

NERC Antitrust Compliance Guidelines and Public Meeting Notice

Consent Agenda — Approve
1. Minutes*
   a. April 13, 2011 conference call
   b. February 16, 2011 meeting

The consent agenda is approved.

2. Future Meetings*

3. Remarks by Gerry Cauley, NERC President and CEO

In Gerry’s remarks, he said he wants to talk about the business plan. Building the EROI is the responsibility of all, including FERC, NERC and industry. Everybody agrees that it is about reliability. The other important aspect is accountability to show that we are doing what is appropriate and doing it right and to increase trust by regulators and the public.

Are we getting there? He says he can still see pieces on the floor but it is gradually taking place. He gave the standard area as an example. It is standards that achieve the ALR. We need to continue to work on productivity. We are past the fact that only expert should be writing standards and that NERC staff should not get involved. We are past that and there is trust with NERC staff.
The third arch of the ERO we are building is enforcement. We understand where we need to get to but there are roadblocks. Citation (ACP) is a good idea but the relief is not there yet. Another opportunity is at deciding what constitutes a violation. Event analysis and lessons learning is another part of accountability.

He advocates for a revamp to the website to create an elibrary and to become the first place we go for reference on reliability.

Performance Metrics is an historic breakthrough in how we measure reliability.

Cold weather analysis continues.

He finishes with a plea to the industry to solve the FAC-008 issue. We can correct this situation at recirculation due June 15. If the vote fails, the Board will be in tough situation. We need to demonstrate that we can act on reliability issue.

4. Recommended Slate of MRC Members to Serve on the Board of Trustees
   Nominating Committee*

Dave Goulding will be chairing the committee.

5. Bulk Electric System Definition*
   a. BES Definition SDT – Pete Heidrich

The presentation is heavily focused on “responding to FERC”. It is clearly focused at pleasing FERC. Pete sticks only to FERC directive.

The definition strives for consistency. So that a transformer included in the West be also included in the East. The revised definition

It is easier to describe what is included than what is excluded.

b. BES ROP Team – Carter Edge

Carter talks about the exception process that includes exclusions and inclusions.

c. BES/ALR Policy Issues Task Force – Bill Gallagher

6. Analysis of Cold Weather Impacts on the Bulk Power System*
Following the extreme cold weather impacts southern U.S., a couple of preliminary observations were presented:

- Some lessons learned from previous, similar events not sufficiently anchored
- Revised EA process working appropriately for larger scale, complex event
- Winterization: Plan deficiencies and Execution deficiencies
- Load shed protocols is being evaluated so is fuel supply

7. Facility Ratings Alert Responses and Next Steps*

Tom Galloway simply presented what has been done and the history of this. There will be a webinar on May 12 to assess plan implementation reporting.

8. Event Analysis Process Improvements*

Tom Galloway presented the phase 2 of Event Analysis. It is all about prioritizes Event Analysis based on risk and significance, response is systematic and oversight/depth of analysis with the categories.

9. ERO Enterprise Performance Metrics*

In introduction, the metrics initiative is presented as being made of two interrelated components: System Reliability Performance NERC and Regional Entity Organizational Performance (RDAs). Such metrics would used to benchmark and improve performance and to provide context for assessing success of overall ERO Enterprise.

The next steps are to seek feedback from Compliance groups and from OC/PC in June 2011 and target OC/PC approval in September 2011.

A presentation of a dashboard is made by NERC staff. It is available on NERC website under Assessment and trends / Reliability indicators.

10. Comments by Observers

NRECA: very pleased w/work on progress in compliance areas

Would advise that CANs would make for a good discussion topic for next MRC meeting; there are positive aspects, but there have been challenges emerging as well; would recommend that this be on the agenda in some shape or form.

Chairman says that CANs appears to be a big concerns to everyone.
EEI filed a substantial comment on the budget with proposal to reduce costs. It also said that we need to do more to keep minor violations reduced.

11. Items for August 2011 MRC Agenda
12. 2012 Business Plan and Budget - will be provided under separated cover
Information Only — No Discussion

Gerry states that NERC was able to introduce discipline and structure to the budget process. He emphasizes that we are following the multi-years plan.

NERC is facing a large volume of regulatory mandates; we need to bring closure to those; rising expectations in critical infrastructure are likewise a challenge.

The highest priorities for 2012 includes:
- issuing new and revised standards, including results-based; 30+ months backlog of addressing violations
- improve ability of industry to respond to incidents, vulnerabilities, threats
- address reliability effects of GMD
- continuing SAFNR initiatives

Gerry believes that SARNR is very useful to support staff.

2013 & 2014 forecasts expected to be substantially less. He expects that it would be in single-digits or even 0. NERC is projecting significant reductions in consultants & contractors (partly a function of certain projects reaching fruition). The Atlanta location will achieve major savings (rent is $26/square foot).

In Canada, we are looking at ~6% increase in assessments and it should be approximately 25% for U.S. entities.

NERC will be posting RE budgets on its website later this week.

WECC said the increase is totally unacceptable.

Paul Murphy from the IESO asked what would happen if we dropped some of the things that NERC does? What are we gaining from processing backlog of minor violations? Is enforcing every requirement of every standard what is really needed for reliability? Should we perhaps absolve past infractions? Perhaps we need improved ability to exercise discretion? We’re not focusing all of our efforts on things that are most important to reliability, as the budget reflects.

13. Update on Regulatory Matters*
Introductions and Chair’s Remarks
NERC Antitrust Compliance Guidelines and Public Meeting Notice
Consent Agenda* — Approve
1. Minutes
   a. March 10, 2011 Conference Call
   b. February 17, 2011 Meeting

2. Committee Membership Appointments and Changes
   a. Standing Committee Membership Changes
   b. MRC Representatives to the Board Nominating Committee

3. Future Meetings

The consent agenda is approved.

Regular Agenda
4. Comments by Commissioner John Norris

I’m just glad to be here. I continue to be engaged in reliability issues. We are making progress in the relation between FERC and NERC.

5. Comments by Commissioner Cheryl LaFleur

She acknowledges how much progress were made. She realises there is still a lot of work to do. Especially after yesterday’s presentations. Jus look at the backlog of violations. Gerry has made a great job. I just was presented the prioritization tools. We now need to execute. She was happy to see Gerry in the paper saying the relation had improved.

6. President’s Report

Gerry says he appreciates the commissioners being here. The constructive dialogue is very helpful.

He ask people to try to understand the value proposition of the ERO which is based on reliability and accountability. We need to be addressing risks to the power system and minimize unnecessary risk. Metrics helps.
We need to find a new model. Just working harder will not solve the logjam of violations. We need to realize that some of these are not worth man-hour of work. Need to solve the big ones.

He would like to see to better involve our expert groups (OC and PC) involved in helping dissect the events and what should be learned.

7. **Reliability Standards* 

No standard to be approved.

a. **Rules of Procedure Appendix 3B – Election Procedure for Members of NERC Standards Committee — Approve**

Herb presented three changes that are being introduced:

- Require the Chair and Vice Chair to serve as non-voting members of the Standards Committee. The purpose of this change is to clarify that the Standard Committee’s officers are expected to act in support of the industry as a whole rather than in support of any particular industry segment. The proposed change would eliminate this conflict of interest and would ensure that each Industry Segment had two representatives.)
- Require a Canadian representative on the Standards Committee to be any company or association incorporated in Canada; any agency of a federal, provincial, or local government in Canada; or any person with Canadian citizenship who is residing in Canada. (Currently there is no requirement that this individual reside in Canada.)
- Simplify the process of filling vacant Standards Committee positions by eliminating the need to collect petitions and hold

David Goulding has a problem (real hard time) with the Canadian representative proposed change. He said that Canadians should just nominate and elect someone they like. He said the Board should not solve the Standard Committee problem. David Cook replied that the proposition reflects the bylaws and is pared down.

The changes are approved with Dave Goulding opposing.

b. **Rules of Procedure Appendix 3D – Registered Ballot Body Criteria — Approve**

The changes:
- Clarified that “individuals” may join as well as organizations and entities
• Added reference to Independent System Operators along with Regional Transmission Organizations
• Expand allowance of agents or associations to represent groups in Segments 3, 5, and 6

The changes are approved.

c. Reliability First Corporation Regional Standards Development Procedure Version 3-b — Approve

On January 14, 2011, NERC received a request from RFC to modify its Regional Standards Development Procedure approved by the RFC Board of Directors.

Unanimous support from everyone member of RFC. Gerry will vote in favour, but only because it is an existing condition.

The changes are approved.

8. Amendments to NPCC Bylaws, Regional Reliability Standards Development Procedure and Compliance Monitoring and Enforcement Program — Approve

David Cook introduces the main changes:
• Hybrid Board Structure
• Merge Stakeholder Sectors
• Election of Stakeholder Directors
• Election of Independent Directors
• NPCC Hearing Body

Ed Schwerdt states that over 99% of approval from membership. NPCC remains open and inclusive, but more efficient.

David Goulding asks whether the Canadians requirements remain and what constraints are defined for independent members. Ed answers that the Canadian requirements remain and that there are no constraint (location) for the independent member.

Approved.

9. Northeast Power Coordinating Council, Inc. — Western Electricity Coordinating Council — Compliance Enforcement Authority Agreement — Approve

Approved.
10. **Update to NERC Membership Roster — Approve**

Approved.

11. **Regulatory Update — Review**

12. **The North American Transmission Forum’s Role in Reliability** - Don Benjamin

**Standing Committee Reports (Agenda Item 13)**

*a. Compliance and Certification Committee*

2012 plan is approved.

*b. Critical Infrastructure Protection Committee*

Under the coordinated plan, the cybersecurity attack TF is underway. Good cross coordination with OC and PC.

Business continuity guidelines will go out soon for comments. More guidelines, like substations, are coming.

c. Member Representatives Committee
d. Operating Committee
e. Personnel Certification Governance Committee
f. Planning Committee
g. Standards Committee
h. Electricity Sub-Sector Coordinating Council

**Forum and Group Reports (Agenda Item 14)**

*a. North American Energy Standards Board*
b. Regional Entity Management Group
c. North American Transmission Forum
d. North American Generator Forum

**Board Committee Reports**

15. **Corporate Governance and Human Resources**
16. **Compliance**
17. **Finance and Audit**

*a. Approve 2010 Audited Financial Statements* 
b. Accept Statement of Activities 
c. Update on Draft 2012 Business Plan and Budget
d. Report to Board Regarding Review of Financial Aspects of Form 990 (No Board Action Required)
18. **Standards Oversight and Technology**
And here are my notes of Day 2. Nothing serious to report from today.

Overall,

- CANs are clearly a concern and will get more ice time in the coming months.
- ALR is the talk of town
- Better relations between FERC and NERC seem a fact

Again, feel free to distribute if you deem appropriate.
Dear Dave,

Attached, in response to Chairman Anderson’s request, is a copy of the NPCC Board of Directors’ policy input to the MRC and BOT for the upcoming May 10–11, 2011 meetings, as it was approved during the May 3rd NPCC BOD meeting. Please distribute this input to the MRC and BOT in advance of the meetings.

Thanks.

Ed
NPCC Board of Directors Policy Input to the
May 10, 2011 NERC Member Representatives Committee
and May 11, 2011 NERC Board of Trustees Meetings

1. **Bulk Electric System (BES) and Adequate Level of Reliability Definitions**
   a. NPCC supports moving the development of a BES Exception Process Criteria from the Rules of Procedure Team to the BES Drafting Team.
   b. NPCC supports posting of a draft BES Exception Process Criteria for parallel review with the 1st Draft BES Definition for industry comment.
   c. NPCC recommends development of a BES Exception Process Criteria that allows for the exclusion of distribution facilities as identified through the application of appropriate criteria, such as those contained in the FERC 7 Factor Test.
   d. NPCC recommends that a cost-effectiveness assessment be conducted as a part of the development of the BES definition.

2. **Facility Ratings (FAC) Alert Responses and Next Steps**
   a. NPCC supports the recommendations put forth in the Facility Ratings Alert issued October 7, 2010.
   b. NPCC has worked closely with its registered entities to provide for a smooth incorporation of the transmission review directed by the FAC Alert.
   c. All applicable NPCC entities have demonstrated a plan in response to the FAC Alert, and all are on schedule for the completion of the first phase of reviews.
   d. NPCC supports streamlining the reporting and monitoring requirements necessary to document the TO and GO transmission reviews.

3. **Event Analysis Process (EAP) Improvements**
   a. NPCC actively supported the Events Analysis Process Phase I field trial and supports the Phase II field trial and an industry-wide sharing of technical findings from events.
   b. NPCC supports an industry-based EAP as an efficient and effective use of manpower resources for analysis of system events, development of lessons learned, and an initial compliance self assessment.
   c. NPCC recommends that, as a component of the lessons learned from an event, registered entities be encouraged to conduct a compliance self assessment proportional with the reliability risks, as a reinforcement of their internal compliance culture.

4. **NERC Metrics**
   a. NPCC supports the collection of appropriate reliability data from the industry, and focusing development on a limited number of performance metrics and risk indices.
   b. NPCC recommends the conduct of selective field trials for data intensive metrics to assure efficient use of industry resources in support of meaningful measures of reliability.
c. NPCC supports the evolution of Regional Delegation Agreement metrics into shared ERO wide objectives and measures.

5. **2012 NERC Business Plan and Budget**
   a. NPCC supports the Common Business Plan and Budget Assumptions collaboratively developed by NERC and the Regional Entities to enhance consistency and efficiencies.
   b. NPCC recommends that additional justification be provided in the draft NERC 2012 Business Plan and Budget to identify specific increases in workload requirements and the commensurate reliability benefits to support a proposed 28 FTE and $7.9 Million (16.1%) increase.
   c. NPCC recommends that additional documentation be provided to demonstrate how the referenced efficiency gains in ERO processes have been factored into requests for additional FTEs (eg. impact of the Administrative Citation Process on increases in the compliance and legal program areas of 22% and 62.5% respectively)

*As Approved by the NPCC Board of Directors at its May 3, 2011 Meeting*
From: Pat Huntley  
To: rsg  
Cc: Darrell Piatt; koneal@ferc.gov; "Leslie Saponaro"; nhenery@ferc.gov; "sc_roster@list-serc1.org"; serc comply; SERC Regional Standards; rsg  
Subject: Proposal to Retire SERC ATC-Related Regional Criteria Posted for Comments:  
Date: Tuesday, May 10, 2011 3:48:49 PM  
Attachments: Proposed Retirement of SERC ATC Regional Criteria Comments Form (Due 06-24-11).docx

To: SERC CIPC Representatives and Alternates  
   SERC EC Representatives and Alternates  
   SERC OC Representatives and Alternates  
   SERC Registered Entity Contacts

The SERC Standards Committee (SC) has directed me to post for a 45-day review period the recommendation of the SERC Operating Committee (OC) ATC Working Group (ATCWG) to retire the ATC-related SERC Regional Criteria. These documents are posted on the SERC website along with the other Standing Committee documents (see below link).

Standing Committee Documents table

Version 0 of the MOD Standards 001, 002, 003, 004, 005, 008, and 009 were applicable to the RROs and required the regions to establish ATC-related methodologies and procedures. The following Regional Criteria were developed in compliance with those standards.

- SERC Regional Criteria – Transfer Capability Methodology (MOD-001-0)  
- SERC Regional Criteria – TTC and ATC Review Procedure (MOD-002-0)  
- SERC Regional Criteria – TTC/ATC Concerns Procedure (MOD-003-0)  
- SERC Regional Criteria – CBM Methodology (MOD-004-0)  
- SERC Regional Criteria – CBM Review Procedure (MOD-005-0)  
- SERC Regional Criteria – TRM Methodology (MOD-008-0)  
- SERC Regional Criteria – TRM Review Procedure (MOD-009-0)

These Version 0 standards were retired on April 1, 2011 when the new ATC standards became effective. The SERC ATCWG has reviewed these Regional Criteria to determine if any portions of the documents need to be retained. The ATCWG recommends that these documents be retired.

The ATCWG is requesting your comments on the proposed retirement of the seven ATC related SERC Regional Criteria documents. A comment form is attached and is also posted on the website (see below link). Please use this form to provide your comments, and send them to regstd@serc1.org by close-of-business on June 24, 2011.

Comment Form-ATC Regional Criteria

Please notify me if you have questions.

Pat Huntley  
Manager, Reliability Standards  
SERC Reliability Corporation  
2815 Coliseum Centre Drive, Suite 500  
Charlotte, NC 28217  
(704) 940-8228 (Office)  
(704) 281-2342 (Cellular)

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COMMENT FORM FOR proposed retirement of:
SERC Regional Criteria – Transfer Capability Methodology (MOD-001-0)
SERC Regional Criteria – TTC and ATC Review Procedure (MOD-002-0)
SERC Regional Criteria – TTC/ATC Concerns Procedure (MOD-003-0)
SERC Regional Criteria – CBM Methodology (MOD-004-0)
SERC Regional Criteria – CBM Review Procedure (MOD-005-0)
SERC Regional Criteria – TRM Methodology (MOD-008-0)
SERC Regional Criteria – TRM Review Procedure (MOD-009-0)

Please use this form to submit comments on the proposed retirement of the SERC ATC Regional Criteria documents (listed above). Comments must be submitted by June 24, 2011. You must submit the completed form via e-mail to SERC Regional Standards (regstd@serc1.org) with the words “ATC Regional Criteria” in the subject line. If you have questions, please contact Pat Huntley (704-940-8228) or phuntley@serc1.org.

DO:  
Do use punctuation and capitalization as needed.
Do use more than one form if responses do not fit in the spaces provided.
Do submit any formatted text or markups in a separate WORD file.

DO NOT:  
Do not submit a response in an unprotected copy of this form.

Commenter Information

Group name (if applicable):
Contact name:
Organization:
Telephone:
E-mail:

Background:
Version 0 of the MOD Standards 001, 002, 003, 004, 005, 008, and 009 are applicable to the RROs and require the regions to establish methodologies for determining TTC and ATC (MOD-001-0), CBM (MOD-004-0), and TRM (MOD-009-0); require the regions to develop review procedures to validate that its members are calculating TTC, ATC, CBM, and TRM consistent with the regional methodologies (MOD-002-0, 005-0, and 009-0); and provide a process for the SERC Region to receive input (concerns or questions) from transmission users regarding Total Transfer Capability (TTC) and Available Transfer Capability (ATC) methodologies and the ATC/TTC values posted by SERC Transmission Service Providers (TSP) (MOD-003-0). The SERC ATC Regional Criteria documents were developed to address these requirements.
New NERC ATC standards (MOD-001-1, MOD-004-1, MOD-008-1, MOD-028-1, MOD-029-1, and MOD-030-2):
The Implementation Plan for the new NERC ATC standards included the retirement of the Version 0 ATC standards (MOD-001-0 through 009-0) as the new standards became effective on April 1, 2011. The SERC Operating Committee ATC Working Group (ATCWG) has reviewed the SERC ATC Regional Criteria documents and recommends that these documents be retired. The ATCWG found no information in these documents that should be retained in a SERC Standing Committee document. The ATCWG is requesting your comments on this recommendation.

Comment form for the proposed retirement of the SERC ATC Regional Criteria documents

Please enter all comments in simple text format.

Insert a “check’ mark in the appropriate boxes by clicking the gray areas.

1. Do you agree with the retirement of the SERC Regional Criteria – Transfer Capability Methodology (MOD-001-0)?
   - Yes
   - No
   - Comments:

2. Do you agree with the retirement of the SERC Regional Criteria – TTC and ATC Review Procedure (MOD-002-0)?
   - Yes
   - No
   - Comments:

3. Do you agree with the retirement of the SERC Regional Criteria – TTC/ATC Concerns Procedure (MOD-003-0)?
   - Yes
   - No
   - Comments:

4. Do you agree with the retirement of the SERC Regional Criteria – CBM Methodology (MOD-004-0)?
   - Yes
   - No
   - Comments:

SERC Standards Committee Posted for Comments: Due: 06/24/11
5. Do you agree with the retirement of the SERC Regional Criteria – CBM Review Procedure (MOD-005-0)?
   Yes □  No □
   Comments: □

6. Do you agree with the retirement of the SERC Regional Criteria – TRM Methodology (MOD-008-0)?
   Yes □  No □
   Comments: □

7. Do you agree with the retirement of the SERC Regional Criteria – TRM Review Procedure (MOD-009-0)?
   Yes □  No □
   Comments: □

8. Do you believe there is any valuable information in these documents that have not been adequately addressed in other SERC documents or the NERC standards? If so, please provide details.
   Yes □  No □
   Comments: □

9. Please provide any other comments on the proposed retirement of these documents.
   □ Comments:
Comment form for the SAR for the proposed revision of the SERC Regional Standards Development Procedure, Exhibit C to SERC Regional Entity Delegation Agreement

Please use this form to submit comments on the Standard Authorization Request (SAR) to revise the SERC Regional Standards Development Procedure, Exhibit C to SERC Regional Entity Delegation Agreement. Comments must be submitted by June 13, 2011. You must submit the completed form by emailing it to SERC Regional Standards regstd@serc1.org with the words “SERC Std Procedure SAR” in the subject line. If you have questions please contact Pat Huntley at phuntley@serc1.org or (704-940-8228).

DO:  
- Do use punctuation and capitalization as needed.  
- Do use more than one form if responses do not fit in the spaces provided.  
- Do submit any formatted text or markups in a separate WORD file.

Commenter Information

Group Name (if applicable):  
Contact Name:  
Organization:  
Telephone:  
Email:  

Background:  
The SERC Regional Standards Development Procedure, Exhibit C to SERC Regional Entity Delegation Agreement was approved by FERC and became effective January 3, 2009. Revision of this document is required to: 1) address document Three-Year Review and Re-Approval Requirements; 2) address issues identified during the SERC 2009 audit by NERC; 3) make revisions to improve process efficiency and reduce the time required to develop a regional standard; and 4) ensure alignment with the NERC Standard Processes Manual, Revision 1 dated November 2010.

Posted along with the SAR is an initial draft revision to the SERC Regional Standards Development Procedure and an accompanying document titled Summary of Proposed Modifications, SERC Regional Standards Development Procedure Rev 2. The SERC Standards Committee is requesting your comments on this SAR and the attached initial draft revision.
Comment form for the SAR for the proposed revision of the SERC Regional Standards Development Procedure

Please enter all comments in simple text format.

Insert a “check’ mark in the appropriate boxes by clicking the gray areas.

1. Do you agree with the “Industry Need” section of the SAR?
   - [ ] Yes
   - [ ] No
   - [ ] Comments:

2. Do you agree with the “Brief Description” section of the SAR?
   - [ ] Yes
   - [ ] No
   - [ ] Comments:

3. Please provide any other comments on this SAR.
   - [ ] Comments:

Questions concerning Draft-1 of Revision 2 to the SERC Regional Standards Development Procedure and the accompanying document titled Summary of Proposed Modifications, SERC Regional Standards Development Procedure Rev 2.

4. Do you agree with the proposed revisions to address issues identified during the 2009 SERC Audit by NERC?
   - [ ] Yes
   - [ ] No
   - [ ] Comments:

5. Do you agree with the proposed revisions to improve process efficiency and reduce the time required to develop a regional standard?
   - [ ] Yes
   - [ ] No
   - [ ] Comments:

SERC Standards Committee Posted for Comments: Due: 06/13/11
6. Please provide any other comments on Draft-1 of Revision 2 to the SERC Regional Standards Development Procedure.

☐ Comments:
To: SERC CIPC Representatives and Alternates
SERC EC Representatives and Alternates
SERC OC Representatives and Alternates
SERC Registered Ballot Body
SERC Registered Entity Contacts

The SERC Standards Committee has directed me to post the Standards Authorization Request (SAR) for a proposed revision of the SERC Regional Standards Development Procedure for a 30-day review period. The Standards Committee accepted the SAR for posting at their meeting on May 10, 2011.

The SAR proposes that the procedure be revised to 1) address the document 3-Year Review and Re-Approval Requirements; 2) address issues identified during the SERC 2009 audit by NERC; 3) make revisions to improve process efficiency and reduce the time required to develop a regional standard; and 4) ensure alignment with the NERC Standard Processes Manual, Revision 1 dated November 2010.

Please use the attached form to provide your comments. The SAR, an initial draft Revision 2 of the procedure, a summary of proposed modifications, and the comment form can be downloaded from the SERC website (see below link). Please send your comments to regstd@serc1.org by close-of-business on June 13, 2011.

SAR for Revision of SERC Standards Development Procedure

One of the next steps in the SERC Regional Reliability Standard Development Procedure is for the Standards Committee to assign a standards draft team, which is referred to as the Responsible SERC Subgroup (RSS). If you are interested in serving on the RSS for this project, please complete the attached drafting team nomination form, which is also posted with the SAR, and return it to regstd@serc1.org also by close-of-business on June 13, 2011. Please notify me if you have questions.

Pat Huntley
Manager, Reliability Standards
SERC Reliability Corporation
2815 Coliseum Centre Drive, Suite 500
Charlotte, NC 28217
(704) 940-8228 (Office)
(704) 281-2342 (Cellular)

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SERC Nomination Form
Update of the SERC Regional Standards Development Procedure Drafting Team (Responsible SERC Subgroup-RSS)

Please return this form to regstd@serc1.org by June 13, 2011. If you have questions, please contact Pat Huntley, SERC Manager of Reliability Standards at regstd@serc1.org or by telephone at 704-940-8228.

Name:
Organization:
Address:

Office
Telephone:
Cell Phone:
E-mail:

Please briefly describe your experience and qualifications to serve on the Update of the SERC Regional Standards Development Procedure drafting team (RSS). Previous experience working on or applying NERC or SERC standards/criteria is beneficial, but not a requirement.

I represent the following SERC Industry Sector (check one):

- [ ] Investor-Owned Utility Sector
- [ ] Federal/State Sector
- [ ] Cooperative Sector
- [ ] Municipal Sector
- [ ] Marketer Sector
- [ ] Merchant Electricity Generator Sector
- [ ] ISO-RTO/Customer Sector
Which of the following Function(s)\(^1\) do you have expertise or responsibilities:

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<tr>
<th>☐ Balancing Authority</th>
<th>☐ Transmission Operator</th>
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<tr>
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<td>☐ Transmission Owner</td>
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<td>☐ Distribution Provider</td>
<td>☐ Transmission Planner</td>
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<td>☐ Generator Operator</td>
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<td>☐ Purchasing-selling Entity</td>
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<td>☐ Interchange Authority</td>
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<td>☐ Load-serving Entity</td>
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Provide the names and contact information for two references who could attest to your technical qualifications and your ability to work well in a group.

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\(^1\) These functions are defined in the NERC Glossary of Terms, which is downloadable from the NERC Web site.