

**APPENDIX A**

**LIST OF SPECIFIC NERC ACTIONS  
IN RESPONSE TO  
STAKEHOLDER AND REGIONAL ENTITY  
COMMENTS AND RECOMMENDATIONS**

**JULY 20, 2009**

## **Appendix A**

### List of Specific NERC Actions

in Response to Stakeholder and Regional Entity Comments and Recommendations

**Appendix A** is a consolidated listing of the specific actions that NERC, partly in response to stakeholder and Regional Entity comments and partly on its own initiative, is taking or intends to take to improve its programs. These actions are described throughout **Attachment 2**. In the coming months, NERC will develop the schedules, budgets and resource allocations, and the tracking mechanisms that will be necessary to implement these actions. NERC expects a number of these action items will flow through to the business plans and budgets of NERC and the Regional Entities in the coming years. NERC expects these action items may be modified as a result of Commission action in response to this performance assessment, as well as in response to feedback NERC receives from applicable governmental authorities in Canada.

In the following list, each numbered, bold-faced item is a summary statement of an issue raised by stakeholders and/or Regional Entities, and the list denoted by “a”, “b” etc. under each numbered item are the actions NERC is taking or intends to take in connection with that issue.

## **A. Reliability Standards Development**

### **1. *Focus existing reliability standards and reliability standards development on areas that will lead to the greatest improvement in bulk power system reliability.***

- a. Continue to utilize the annual Reliability Standards Development Plan to prioritize and guide reliability standards development activities.
- b. Continue outreach efforts to obtain feedback from industry stakeholders as well as from the NERC program areas, especially compliance monitoring and enforcement, reliability assessment and performance analysis, and event analysis, for use as input into the 2010–2012 version of the Reliability Standards Development Plan, which is to be considered for approval by the board in November 2009, and in subsequent versions of the Development Plan.
- c. Complete the Standards Committee activity to identify administrative requirements in the current set of reliability standards and provide these as input (as candidates to be removed from the reliability standards) to the 2010–2012 version of the Reliability Standards Development Plan.
- d. Develop and begin implementing a plan that includes engagement of the regulatory authorities to convert the existing set of reliability standards and requirements to a smaller set of critical performance-based reliability standards. [Ongoing]
- e. Develop a list of all outstanding FERC reliability standards directives and a prioritization process for reliability standards development that strikes a balance between regulatory directives, industry input, and feedback on reliability performance from the event analysis, reliability assessment, and compliance programs. [by December 31, 2009]
- f. Continue to use more broad-based initiative approaches, like the System Protection Initiative and NERC's efforts to address in reliability standards development the issues identified by the Commission in Order No. 706 to protect the critical electric infrastructure from malicious cyber attack, to identify and address requirements for improving bulk power system reliability that would be pursued in projects to develop new or revised reliability standards. [Ongoing]
- g. Conduct a technical conference with invited subject matter experts to assess conformance of existing reliability standards to the stated reliability principles and to the definition of Adequate Level of Reliability [by June 30, 2010].

### **2. *Accelerate the reliability standards development process.***

- a. SARs
  - i. For narrowly focused requests, post SARs without a comment period or for a single 15-day comment period without a requirement for the requester to respond to all comments individually.
  - ii. For proposed reliability standards implementing new technical concepts, require a technical foundation document (e.g., a research paper) be developed before a SAR is accepted, not concurrent with or after acceptance.
  - iii. Provide the option for a requestor to submit a draft reliability standard along with the request to develop a new or revised reliability standard.

- b. Informal Comment Periods
  - i. Permit standard drafting teams to use “informal” comment periods for feedback on concepts or information used to develop reliability standards requirements (but not for comments on proposed requirements) where they are not required to respond to the individual comments. [Changes to Section 300 of the NERC ROP and/or Appendix 3A — Reliability Standards Development Procedure may be necessary or desirable.]
- c. Requirements
  - i. Reinforce with the standards drafting teams the need to fully address regulatory directives during development activities such that subsequent modifications to the standards are not necessary, thereby reducing future workload. [Ongoing]
- d. Ballots
  - i. Permit multiple initial ballots without the need for multiple 30-day pre-ballot review periods. Permit modification to the balloted reliability standard between these multiple initial ballot periods if the ballot results and associated comments indicate such modifications will provide for continuous improvement to the reliability standard without lowering the thresholds for performance needed to support reliability [Changes to Section 300 of the NERC ROP and/or Appendix 3A — Reliability Standards Development Procedure may be necessary or desirable.].
- e. Process Administration
  - i. Give the NERC Standards Committee the option to appoint a single standard drafting team that is responsible for both SAR and reliability standard drafting development.
  - ii. Review the reliability standards development process to identify, eliminate, and/or modify steps that are not explicitly required by ANSI to maintain accreditation — by December 31, 2009. [Changes to Section 300 of the NERC ROP and/or Appendix 3A — Reliability Standards Development Procedure may be necessary or desirable.]
  - iii. Implement a streamlined single topic development process to correct a narrowly focused reliability standard deficiency without obligating a follow-up reliability standards development activity — by June 30, 2010. This process could be used for making conforming changes to reliability standards as a result of interpretations, etc. [Changes to Section 300 of the NERC ROP and/or Appendix 3A — Reliability Standards Development Procedure may be necessary or desirable.]
  - iv. Explore how other ANSI standard development organizations implement their standard development processes to identify possible improvements to NERC’s process, including the supermajority voting structure — by October 1, 2009.
- f. Training and Support
  - i. Conduct a detailed pre-kickoff session between NERC staff, standard drafting team chairs and vice-chairs, subject matter experts, and regulatory authority staff (if regulatory directives for improvement are involved) to discuss more fully the technical expectations of a reliability standard project and roles and responsibilities of the participants. [Ongoing]

- ii. Provide training for NERC staff coordinators in team-building, facilitation, and consensus-building skills — by October 1, 2009.
- iii. Provide enhanced training to the standard drafting team chairs and vice-chairs to ensure that they convey their expectations clearly and effectively to drafting team members.
- iv. Assign technical writers, regulatory specialists, or have legal support available as focused resources for standard drafting teams dealing with challenging requirements or directives.
- v. At the discretion of the standard drafting team chair, permit a NERC-assigned legal or technical writer to draft reliability standard language based on the standard drafting team's discussion and direction.
- vi. With permission of the standard drafting team chair, allow NERC staff coordinator to provide a straw man draft reliability standard in advance of the first standard drafting team meeting to optimize effective team discussion.

**3. *Promote, encourage, and facilitate participation by smaller entities.***

- a. Encourage active participation by industry trade groups, especially APPA, NRECA, and EPSA in the reliability standards development process to foster outreach to and solicit increased participation by smaller entities and/or representatives of their interests. [Ongoing]
- b. Develop increased project communications to enable all stakeholders to understand the changes to reliability standards and the expectations therein for registered entities. [Ongoing]
- c. Schedule meetings at more centralized locations to minimize the overall time burden from required travel and continue to conduct over half of standard drafting team activities by conference call or Web-based meetings. [Ongoing]

**4. *Role of Regulatory and NERC staff in reliability standards development.***

- a. NERC board to direct changes to the *Roles and Responsibilities* document (approved by the Standards Committee in March 2009) in order for that document to incorporate the board's expectation that NERC staff will provide the board with its technical evaluations of reliability standards proposed for adoption by the board, including assurance that the reliability standards can be complied with and are auditable.
- b. Reinforce to standard drafting teams that they must develop an approach consistent with regulatory authority directives or, in the alternative, an equal and effective approach to that identified in the regulatory authority directives; if different than a FERC directive, the team must thoroughly document their technical rationale for doing so. [Immediately]
- c. Conduct discussions with FERC staff upon issuance of a Notice of Proposed Rulemaking concerning adoption of a proposed reliability standard or group of reliability standards to ensure an understanding of the Commission's intent before issuance of a final order.
- d. Develop a focused process to obtain feedback from the industry stakeholders regarding newly-issued orders and rulings on proposed reliability standards to determine if filing a request for rehearing or clarification is appropriate within the 30-day window.

**5. *Better align functional categories with current industry/market structure.***

- a. The Functional Model Working Group (FMWG) will complete its Version 5 revisions that address key areas such as the planning function, the load serving entity, distribution provider function, and the interchange function, of which the changes will be incorporated into NERC reliability standard applicability. The target date for completion of Version 5 is October 2009. Projects for implementing the changes related to the FMWG Version 5 activity into the reliability standards will be incorporated into the next three-year Reliability Standards Development Plan.
- b. Implement the recommendations from the Ad Hoc Group for Generator Requirements at the Transmission Interface. The group is scheduled to complete its work by the end of 2009.

**6. *Provide clear measures for each standard requirement.***

- a. Work with the compliance program to ensure that measures (1) directly correspond to each requirement of each standard describing what an entity has to do to comply, (2) include examples of acceptable evidence without being overly restrictive, and (3) identify what documents are necessary to maintain and produce to demonstrate compliance. These expectations should be conveyed to stakeholders in the Reliability Standard Audit Worksheets (RSAWs) or through other suitable approaches.

**7. *Enhance Stakeholder Communications.***

- a. Continue to conduct open Webcasts to present and obtain feedback on proposed concepts; for example, to stakeholders as reliability standards are being developed.
- b. Provide the industry stakeholders with a NERC forum or blog to enable them to communicate with regard to reliability standards under development and on reliability standards activities in general. Target to provide is 2010.

**8. *Expedite completion of “fill-in-the-blank” reliability standards.***

- a. Address the “fill-in-the-blank” reliability standards as part of NERC’s three-year Reliability Standards Development Plan.

**B. *Organization Registration and Certification***

**1. *Raise threshold criteria for requiring entities to be registered.***

- a. Review existing registration criteria with NERC technical staff for possible changes.
- b. Request comments from stakeholders on the existing criteria through the Organization Registration and Certification Subcommittee (ORCS) of the Compliance and Certification Committee (CCC), as well as from NERC’s Planning and Operating Committees.
- c. Request comments on the existing criteria from the Regional Entities through the Registration Working Group (RWG).

- d. Review data from registered entities surveys currently being administered by the RWG with NERC oversight for criteria application issues.
- e. Support Regional Entities working through existing procedures; continue the process of responding to specific issues related to registration criteria on a case-by-case basis.
- f. Reinforce to Regional Entities that they can remove entities from the Compliance Registry, but the Regional Entity must determine that removal of the entity creates no material impact to bulk power system reliability before the entity is removed from the Compliance Registry.
- g. If an event analysis finds entities that meet the criteria for inclusion in the NERC Compliance Registry that were not on the Compliance Registry when they were involved in a disturbance, these entities will be immediately added to the registry for all applicable functions. If an event analysis finds entities that do not meet the criteria for inclusion in the Compliance Registry, but were involved in a disturbance, the event analysis team can recommend to the applicable Regional Entity that these entities be added to the Compliance Registry.

**2. *Allow registration by requirement.***

- a. NERC will continue to promote the use of JRO agreements.
- b. NERC will attempt to identify other solutions short of “registration by requirement” that will address the concerns expressed by stakeholders.

**3. *Improve consistency across Regional Entities.***

- a. On an ongoing basis, review with the Regional Entities current practices for organization registration and provide additional guidance, as necessary, to improve consistency.
- b. Complete the project for updating registered entity information [by late summer 2009].
- c. Complete the specific NERC actions listed in Organization Registration Issue #1.

**4. *Provide process for single registration for entities doing business in more than one Regional Entity.***

- a. Continue and complete development of the MRRE processes and procedures (initial draft by July 2009).
- b. Amend the delegation agreements and ERO Rules of Procedure as necessary to include or accommodate such processes and procedures.

**5. *Improve joint registration procedures.***

- a. NERC will continue, in conjunction with the Regional Entities, to review the joint registration process for possible improvement.
- b. NERC will revise presentations used at Regional Entity conferences and workshops to include more detailed information on JRO registration process and procedures.
- c. NERC will review the JRO process with the NERC legal department and develop, as applicable, guidelines for JRO registration, including a suggested template for JRO agreements.

## **C. Compliance Monitoring and Enforcement**

### **1. *Put more emphasis on training, education, and assistance regarding what it takes to comply with, and to demonstrate compliance with, reliability standards.***

- a. Develop a proposed process or processes by which registered entities can submit hypothetical or proposed means of complying and demonstrating compliance with particular reliability standards for review and guidance by NERC. The implementation of any such processes must take into account the impacts on NERC and Regional Entity time and resource constraints.
- b. Evaluate and implement ways to make registered entities more aware of means currently available to them to obtain guidance on how to comply with reliability standards and how to demonstrate compliance.
- c. Promote more assistance by others, including third-party providers and industry trade associations. Consider partnering with industry trade associations where appropriate.
- d. Increase the offerings of programs and information by the NERC training and education program focused on appropriate means of complying and demonstrating compliance with particular reliability standards.
- e. Get more compliance cases processed through the system as one mean of providing guidance on what is leading to violations.

### **2. *Eliminate the backlog of audit reports and compliance violations so more precedents are available to industry.***

- a. Continue to develop and expand the uniform set of forms, templates and detailed set of processing steps, including “example” documents, which Regional Entities must follow.
- b. Establish a more extensive training program for Regional Entity compliance personnel.
- c. Continue to develop simplified, streamlined options for processing violations, including various forms of “pro forma” settlements, for certain frequently occurring violations that pose a lower risk to the bulk power system (e.g., missing documentation and other administrative, low-risk violations) by establishing standard penalties and mitigation plan elements that can be processed more expeditiously.
- d. Continue to identify and implement improvements to the management plan for the compliance enforcement program, including the delegated functions.
- e. Provide the option for Regional Entities to ask for help and advice in advance of issuing Notices of Alleged Violation and Proposed Penalty or Sanction, or proffering a settlement offer, to a registered entity.
- f. Continue to increase NERC and Regional Entity staffing and other resources dedicated to the Compliance programs, including processing Notices of Alleged Violation, settlements, and mitigation plans.
- g. Continue development of a common, centralized platform for collection and maintenance of compliance information by NERC and the Regional Entities.
- h. Continue to study NERC and Regional Entity compliance processes to identify and implement ways to eliminate duplication and overlap and streamline and shorten those processes.



- i. Amend the delegation agreements and ERO Rules of Procedure as necessary to implement or accommodate the proposed actions.
3. ***Provide more guidance on mitigation plans and process proposed plans more quickly.***
    - a. Continue to monitor the process for review, acceptance, and approval of mitigation plans to ensure timely processing.
    - b. Develop templates and/or lists of “pre-approved” appropriate mitigation steps for particular types of violations.
  4. ***There is no incentive for registered entities to self-report violations because there is no apparent benefit or advantage to self-reporting.***
    - a. Continue to offer the pro forma settlement approach (as revised) for self-certified or self-reported minor violations and those of an administrative nature.
    - b. At such time as a significant sample of enforcement actions have been completed, evaluate such actions overall for the impact on self-reporting.
  5. ***Focus audits on whether the registered entity’s actual performance demonstrates compliance rather than on documentation and provide recommendations for improvement.***
    - a. Continue to revise the RSAWS to improve their quality and usefulness.
    - b. Continuously review compliance audit processes and post-audit questionnaires to verify the audit team provided the registered entity with adequate opportunity to explain and demonstrate how the registered entity has complied with the applicable requirements.
  6. ***Provide more uniformity and consistency in audits between Regional Entities and between different audit teams.***
    - a. In conjunction with the Training and Education Program, review the need for additional auditor training, including remedial training or counseling in cases where specific problems are identified.
    - b. Review existing templates or instructions for compliance audit reports to ensure they require specific discussion of how compliance was demonstrated by the registered entity and what evidence was lacking in determinations of non-compliance.
    - c. Continue to monitor the Regional Entities’ implementation of their compliance programs, including audits, through the NERC Regional Operations Group.
    - d. Amend the delegation agreements and NERC ROP as appropriate to accommodate and support the proposed changes to ensure consistent implementation of the CMEP processes across Regional Entities.
  7. ***Improve the efficiency and effectiveness of the compliance audit process.***
    - a. NERC will continue to review the results of compliance violation results and event analyses to select reliability standards and requirements for active monitoring in order to focus attention on those areas where reliability could be most improved.

- b. NERC will consider splitting the 3-year or 6-year audits into a series of audits that cover fewer reliability standards in each audit but that in the aggregate will cover all the required reliability standards within the 3- or 6-year window.
- c. NERC will continue to solicit feedback from registered entities on their audit experience (including through reviewing registered entities' responses to post-audit questionnaire), and consider the information gained and observations from participation by NERC personnel in Regional Entity audits, to identify areas for improvement in audit processes and training auditors.
- d. NERC will consider revising the audit process (as specified in the uniform CMEP, Appendix 4C to the NERC ROP) to provide more time prior to audits to complete RSAWs. Some Regional Entities have already taken this action.

**8. *Improve the quality and value of the RSAWs.***

- a. Work with Regional Entities to update the CIP RSAWs.
- b. On a going-forward basis, in conjunction with Regional Entities, and based on feedback from registered entity post-audit questionnaires, continue to improve the quality and usefulness of the RSAWs.
- c. Formalize the RSAW development and maintenance process in the NERC ROP and delegation agreements.

**9. *Compliance violation investigations take too long.***

- a. Continue to review compliance violation investigation processes, procedures, and training for streamlining and improvement.
- b. In conjunction with event analysis, review the process for coordinating the initiation of CVIs and event analyses. [See also specific NERC action D.6.a.]
- c. Disseminate preliminary lessons learned from CVIs to the industry as soon as practicable.

**10. *Basis for penalty determinations needs to be more transparent.***

- a. Conduct a policy-level review of the Sanction Guidelines and address improvements in the penalty determination process.
- b. Implement the option for Regional Entities to request earlier NERC involvement in the development of Notices of Alleged Violation and Proposed Penalty or Sanction, or of settlement offers to be proffered to registered entities, prior to issuing those notices and offers to registered entities.

**11. *Improve system for submitting compliance information.***

- a. Complete the development and implementation of the new database entry and query system.
- b. Complete implementation of common report forms within the Regional Entities and common input specifications.
- c. Amend the delegation agreements as appropriate to accommodate and support the proposed changes regarding common report forms and common input specifications.

**12. *Data retention requirements in compliance audit scopes conflict with those in reliability standards.***

- a. Identify which reliability standards contain provisions related to document retention that are inconsistent with the CMEP and Rules of Procedure and initiate revisions to those reliability standards.
- b. In conjunction with the Regional Entities, communicate with registered entities the provisions contained in Compliance Process Bulletin #2009-005: "Current In-Force Document Data Retention requirements for Registered Entities."

**13. *Maintaining compliance with CIP reliability standards while providing critical energy infrastructure documentation to compliance teams.***

- a. Complete the development of a formal procedure describing how compliance audit teams will treat critical energy infrastructure information.
- b. Continue evaluation of a secure portal at NERC for receiving critical energy infrastructure information from registered entities.

**D. Event Analysis and Information Exchange**

**1. *Backlog of final event analysis reports delays dissemination of lessons learned to the industry; consider interim reports.***

- a. Revise the event analysis process to include interim reports for detailed event analyses that are expected to take more than 3 months to complete.
- b. Revise the event analysis process to issue alerts as they are developed during the course of the analyses as circumstances warrant.
- c. Complete hiring to fill open budgeted positions.

**2. *Establish threshold criteria for which events will be analyzed.***

- a. Review existing threshold criteria for possible revision. [By July 2009]

**3. *Use root-cause analysis experts (staff or consultants) to expedite analyses.***

- a. Use contractors for root-cause analysis in event analyses, as needed and as budget allows.
- b. Include a budget item in the 2010 budget for root-cause analysis training of NERC and Regional Entity event analysis staff.

**4. *Some recommendations to industry assume that the cause of an individual event represents a general practice.***

- a. Make clear in alerts whether the basis for an alert is derived from a single event, trends seen in multiple events, technical findings from analyses, or generic equipment problems.

**5. *Include more detail in alerts.***

- a. Additional detail will be added to alerts, where warranted, through hot links in the alert to controlled access portals in the new Secure Alerts System to avoid compromising critical infrastructure information.

**6. *Separate event analyses from CVIs to eliminate the prosecutorial presumption of violation aspects from event analyses.***

- a. Review and expand existing procedures to clarify the interface between event analyses and CVIs with the objective of preserving and promoting, in event analyses, the open exchange of information necessary for feedback to the industry for purposes of reliability improvement.

**E. Reliability Assessment**

**1. *Assessment reports need to avoid taking policy advocacy positions and include more support from well-researched information.***

- a. Investigate and validate assumptions, data, and conclusions in future reliability assessments to ensure that they line-up with data or information provided by the Regional Entities and/or Planning Committee and its subgroups.
- b. NERC will avoid taking policy advocacy positions in its reliability assessments.

**2. *Improve reliability assessment metrics including their definition, calculations, and granularity, along with the transparency and process used to incorporate NERC comments into Regional self assessments.***

- a. Reorganize its Long-Term Reliability Assessment (LTRA) to better reflect the interconnections while respecting the boundaries of the NERC Regions.
- b. Refine NERC's peer review process, ensuring that comments of NERC and other Regional representatives are reflected in reliability assessments. Ensure industry representatives will have ample opportunity to voice their comments on the entire report.
- c. Engage NERC's Reliability Metrics Working Group, to vet, validate, and improve the metrics used in reliability assessment reports.

**3. *Recognize state-mandated capacity procurement requirements in assessments.***

- a. Consider including, in NERC's Reliability Assessment Guidebook, that Regional self-assessments acknowledge the existence of state/provincial mandated capacity requirements, where they exist, as well as address reliability issues beyond the current ten-year assessment horizon.

**4. *Expand the long term assessment beyond the present 10-year horizon.***

- a. With the NERC Planning Committee and the Reliability Assessment Subcommittee, study the suggestion of increasing the horizon of the LTRA beyond 10 years in light of increased interest in reducing greenhouse gases through renewable portfolio standards, other climate change initiatives, and related state, provincial, and national policies that are driving change in the industry.
- b. The special task force which studied the issue of accommodating high levels of variable generation is also a vehicle to study and make recommendations on issues that involve these longer-time horizon issues.
- c. Other matters requiring a longer view will be reviewed on a case-by-case basis.

**5. *Expand NERC's data gathering to include more bulk power system entities for a more complete set of interconnection information: also reduce amount of data being collected.***

- a. Staff will engage Regional stakeholder working groups as they develop the Regional assessments.
- b. Coordinate with EIA and FERC to minimize or eliminate duplicative reporting and data collection requirements.
- c. Form a high-level industry group (Data Coordination Subcommittee), under the direction of NERC's Planning Committee to focus on data collection, coordination, and substantiation.

**6. *Share reliability and adequacy assessments through Web-based tools.***

- a. Expand NERC's use of Webinars and other Web-based approaches to more effectively share the results and gather input from stakeholders of NERC's reliability assessment reports.

**7. *Conduct "scenario assessments" for NERC's LTRA.***

- a. Continue with the processes outlined in the reliability assessment improvement plan.

**F. *Performance Analysis and Metrics***

**1. *Improve process for data collection.***

- a. Develop a centralized automated data collection, reporting and validation process, and calculation tools to support reliability metrics.

**2. *Develop only those metrics critical to bulk power system reliability.***

- a. Calculate metrics identified as key indicators of bulk power system reliability, measured against the six characteristics of the ALR.

- b. Vet metric development, collection, and analysis with industry stakeholders through the Reliability Metrics Working Group.

**3. *Consider what metrics Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs) already have developed.***

- a. Continue to call for metrics submittals from NERC's committees and subgroups and all NERC stakeholders.
- b. Submitted metrics will be assessed by the RMWG on an ongoing basis as a vehicle for continuous improvement of the metric development, deployment, and retirement process.

**4. *More dissemination of metrics to industry.***

- a. NERC will work with the RMWG to issue the first annual reliability performance report in 2010 for the 2007–2009 timeframe and share metric analysis results through its quarterly updates on NERC's website, NERC News, and via Webinars.

**G. *Critical Infrastructure Protection***

**1. *Centralize direction for implementation of Critical Infrastructure Protection (CIP) reliability standards at NERC rather than allowing Regional Entities to engage in their own efforts.***

- a. Develop and deliver the CIP fundamentals course to NERC and Regional Entity compliance auditors. This will help provide a cross-Regional and NERC-wide level base of understanding of both CIP's fundamentals and the auditor responsibilities.
- b. Develop CIP fundamentals educational material for industry participants. This effort targets the individuals within the industry who are responsible for implementing the CIP standards and will lead to a more uniform understanding of implementation issues.
- c. Develop and deliver advanced skills training for auditors to improve their performance, including CIP knowledge and soft-skills applications. This more advanced training will again help ensure uniformity across all NERC Regions in the auditing role.

**2. *More timely guidance on implementation of CIP reliability standards, especially for the identification of Critical Cyber Assets using risk-based methodologies; place greater reliance on technical committees.***

- a. NERC CIP and standards staff is taking aggressive efforts and providing specialized support to the Project 2008-06 Cyber Security Order 706 standard drafting team. This is a multiple-phase project in which NERC staff will work closely with the Cyber Security Order 706 standard drafting team to expeditiously complete work on revisions to CIP-002 through 009 reliability standards.
  - o The first phase (Phase I) of the project proposes Version 2 CIP-002 thru CIP-009 reliability standards to primarily address the FERC directive to remove the phrase "reasonable business judgment," but it also includes a number of other revisions

to the same set of reliability standards. The revised CIP standards resulting from Phase I were adopted by the NERC Board of Trustees on May 6, 2009, and filed with the Commission for approval on May 22, 2009.

- o The second phase (Phase II) of the project will be much more complex and will involve drafting Version 3 CIP-002 thru CIP-009 reliability standards; proposing how to best address the other directives in FERC Order No. 706. Consideration will be given to the applicable features of the NIST standard framework described in NIST 800-53 as well as the identification of what cyber equipment should be addressed by the CIP reliability standards.
- b. Work with the Critical Infrastructure Protection Committee (CIPC) to expeditiously finalize the development and issuance of guidelines on the implementation of CIP reliability standards, especially for the identification of Critical Assets and Critical Cyber Assets using risk-based methodologies.

CIPC's Security Guideline Working Group (SCWG) document on identification of Critical Assets was presented at the March 2009 CIPC meeting and was unanimously approved for posting to solicit industry comments. The SCWG is currently reviewing the comments received on the posted draft and plans to develop a revised document for consideration for approval by CIPC in September 2009. SCWG's document on identification of Critical Cyber Assets has been sent to CIPC for comment. It will also be posted for industry comment and is expected to CIPC for approval in December 2009. Following approval by CIPC, these guidelines will be submitted to the NERC Standards Committee for posting as a reference document associated with CIP standards. NERC will continue to participate with the guideline standard drafting team to resolve any industry comments received during this markup process and support the CIPC in completing the guideline development and approval process.

### **3. *Need for Technical Feasibility Exceptions (TFEs).***

- a. Finalize "Procedure for Requesting and Receiving Technical Feasibility Exception to NERC Critical Infrastructure Protection Standards" based on a review of comments to the posting, and submit it to the NERC Board of Trustees and FERC for approval as amendments to the NERC ROP.

### **4. *Need a fast-track process for interpretation requests for CIP reliability standards***

- a. Work with the reliability standards and compliance monitoring and enforcement programs to consider how to "fast-track" the development of interpretations to CIP reliability standards.
- b. Evaluate the possibility of, and if determined to be appropriate, implement, a CIP reliability standards hotline or other assistance function similar to the assistance functions provided by other regulatory and self-regulatory organizations (e.g., NRC, FINRA, etc.) to address CIP reliability standards questions.

**5. *Cyber security alerts insufficiently targeted and lack detail.***

- a. Complete the implementation of the NSANS that will give the ES-ISAC/NERC the power to alert and notify registered entities of the bulk power system, and other utilities of the electricity sector, of vulnerabilities, threats, and/or abnormal events/conditions, or other significant events that may impact the bulk power system.
- b. Continue to develop the Hydra group and functionality and its use on emerging cyber security assessments.
- c. Utilize the personnel targeting features of the NSANS to eliminate the burden applied to the compliance point of contact.

**H. *Situation Awareness***

**1. *Real-time situation awareness is outside of NERC's scope.***

- a. NERC will continue to develop its SA to meet obligations set forth in its ERO certification application and in NERC's ROP, Section 1000. In carrying out its responsibilities and obligations as the ES-ISAC, NERC will work to provide SA and facilitate emergency preparedness and response exchanges between the industry and governmental authorities as appropriate. NERC will better communicate to the industry the need for, and measure the value of SA efforts to include, the SAFNR program.
- b. NERC will continue to support and improve its ability to efficiently and effectively develop and manage existing and future reliability tools.

**2. *Define acceptable communications protocols for use during system events.***

- a. NERC will continue to work with the ESSG, the ES-ISAC, and NERC technical committees to develop and improve upon communications protocols for use during system events.

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

**1. *Broaden the operator certification program to include credentials for more functions and revise the criteria for qualifying activities.***

- a. Research the feasibility of offering an advanced system operator credential as well as credentials for generator operators and Regional dispatchers.
- b. The PCGC will consider including more qualifying activities in the requirements used to maintain a credential.



**2. *Improve the current system used by system operators and training providers for tracking continuing education hours (CEH) to maintain a credential.***

- a. Continue to improve the database used by the program, including additional functionality to allow persons designated by a certified person to view full course records that are not sensitive or confidential.

**3. *Offer more targeted and timely education programs.***

- a. Add a resource to the 2010 budget to provide more targeted and timely information for stakeholders about upcoming changes to reliability standards and their compliance requirements, etc.
- b. Research a platform on which to establish an “open source” system for providing information to the industry.
- c. Work in cooperation and coordination with the Regional Entities and industry associations to determine what Webinar topics would be most beneficial for bulk power system owners, operators, and users in an effort to provide useful feedback for improving reliability.

**4. *Requirements for training programs and training providers.***

- a. Expand NERC’s role in establishing accreditation criteria for training programs by releasing a white paper for comment in late 2009.

**J. *Finance and Controls***

**1. *Reflecting stakeholder comments in budgets.***

- a. NERC will continue to strive to improve its business plan and budget development processes and presentations.

**2. *Provide executive-level summary graphs and tables in future business plans and budgets.***

- a. In the 2010 Business Plan and Budget, NERC will review the content of the introduction and consider providing additional graphs and tables to summarize information contained in the body of the document.

**3. *Develop multi-year business plans for NERC.***

- a. Consider including in future business plans and budgets discussions of possible future programs, or anticipated expansions of or increases in resources needed by existing programs, and their cost and resource requirements.

**4. Responding to FERC on business plan and budget submittals.**

None.

**5. Allocation of budget costs.**

- a. In conjunction with future annual business plans and budgets, review the rationale for continued use of NEL as the sole basis for allocating costs.
- b. Consider in developing the basis for cost allocation to Canadian entities those costs associated with FERC-specific requirements.

**6. Request NEL information directly from load-serving entities.**

- a. Review with Regional Entities the mechanism for collecting NEL data and evaluate if there is any advantage in terms of accuracy, efficiency, or cost-effectiveness to having NERC collect these data directly from load-serving entities, rather than the Regional Entities collecting the data.

**7. Amend the budget templates.**

None.

**8. Apply standard language for reliability standards development and compliance in NERC and Regional Entity business plans and budgets.**

- a. Utilize the common goals, objectives, and assumptions in the 2010 planning cycle.

**9. Change the timing of the budget process.**

None.

**10. NERC and the Regional Entities should update annually their rolling three-year goals.**

- a. Discuss the proposal with the REBG to identify whether it is generally supported and what steps would be required to implement it.

**11. Share best practices and tools.**

- a. Discuss proposal with the REBG to identify overall level of acceptance and possible implementation steps.

**12. Consider a “shared reserve” among Regional Entities and NERC.**

- a. Continue discussion with Regional Entities concerning this concept as future budgets are developed.

**13. *Standardize language and expectations on components of indirect costs.***

- a. In conjunction with the Regional Entities, complete development of a common definition of, and procedures for recording and budgeting, indirect costs.
- b. Consider revisions to the delegation agreements to address this issue as appropriate.

**14. *Implement a uniform budgeting tool.***

- a. Discuss concept with the REBG to evaluate if there is consensus to pursue development of such a tool.

**15. *Adopt uniform budget metrics.***

- a. Continue efforts in the 2010 budget cycle.

**16. *NERC and Regional Entities should use generally accepted accounting principles.***

- a. Continue implementation in the 2010 and future year budgets and in the 2009 and future year reporting of actual costs

**K. *Stakeholder Communications and Public Relations***

**1. *NERC Website functionality and ease of use.***

- a. NERC will continue to conduct regular surveys of the users of the NERC Website and develop tools to track and measure usability of its Website based on the survey results. The most recent survey has been completed.
- b. NERC will implement improvements to the Website based on these results.
- c. Add a standard “Approvals” box in the footer of each standard to indicate NERC board and FERC approval dates along with a link to the table of “Effective Dates for Mandatory Standards.”
- d. Display more prominently and obviously on the NERC Website the listing of “Effective Dates for Mandatory Standards” and change the title to “List of FERC-Approved Standards and Effective Dates.”
- e. Provide better access to frequently used information, including where to find information about balloting.

**2. *Outreach to non-traditional and smaller entities.***

- a. NERC will seek input from industry associations on improving outreach to non-traditional and smaller entities.
- b. NERC will work to implement specific suggestions received as a result of these discussions.

**FEDERAL ENERGY REGULATORY COMMISSION  
DOCKET NO. RR09-\_\_\_**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

**ATTACHMENT 1**

**TO**

**THREE-YEAR  
ELECTRIC RELIABILITY ORGANIZATION  
PERFORMANCE ASSESSMENT REPORT**

**I. DISCUSSION OF HOW NERC MEETS  
THE ERO CERTIFICATION CRITERIA OF 18 C.F.R. §39.3(b)**

**II. NERC PROGRAM AREA  
STATEMENTS OF ACTIVITIES AND ACHIEVEMENTS**

**JULY 20, 2009**

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**Appendix A:** Analysis of Duration of Standards Development Projects, January 2002–May 2009

**Appendix B:** Analysis of Standards Ballot Results, July 2006–May 2009

**I. DISCUSSION OF HOW NERC MEETS  
THE ERO CERTIFICATION CRITERIA OF 18 C.F.R. §39.3(b)**

**1. The ERO has the ability to develop and enforce, pursuant to 18 C.F.R. §39.7, reliability standards that provide for an adequate level of reliability of the bulk power system**

This criterion encompasses two distinct functions of the ERO: (i) the ability to develop reliability standards that provide for an adequate level of reliability of the bulk power system, and (ii) the ability to enforce those reliability standards.

**Development of Reliability Standards**

NERC develops reliability standards pursuant to Section 300 of its Rules of Procedure (ROP) and its Reliability Standards Development Procedure (RSDP), Appendix 3A to the ROP, both of which have been approved by the Commission as ERO Rules.<sup>1</sup> In addition to having been approved by the Commission, the RSDP has been accredited by the American National Standards Institute (ANSI) as meeting ANSI's essential requirements for standards development.

The overall purpose of NERC's reliability standards development process, as stated in Section 301 of the NERC ROP, is to develop and maintain reliability standards that apply to bulk power system owners, operators and users and that enable NERC and the Regional Entities to measure the reliability performance of the owners, operators and users and to hold them accountable for the reliable operation of the bulk power system. Section 301 of the ROP requires that reliability standards developed by NERC must be technically excellent, timely, just, reasonable, not unduly discriminatory or preferential, in the public interest, and consistent with other applicable standards of governmental authorities.<sup>2</sup>

In Order No. 672 and the *ERO Certification Order*, the Commission stated that the ERO's reliability standards development process must ensure that each reliability standard is technically sound; that its operational specifications are designed to achieve a valuable reliability goal; that the standard is clear and unambiguous regarding what is required and who is required to comply; and that there be clear criteria to measure whether an entity is in compliance with the reliability standard, so that enforcement can be applied in a consistent and non-preferential manner.<sup>3</sup> Consistent with these requirements, Section 302 of the ROP specifies the essential

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<sup>1</sup> Sections 304 and 308.1 of the NERC ROP specify that "NERC shall develop reliability standards in accordance with the NERC *Reliability Standards Development Procedure*, which is incorporated into these rules as Appendix 3A." The current version of the RSDP is Version 6.1 which became effective June 7, 2007.

<sup>2</sup> Section 304 of the ROP sets forth NERC's "Essential Principles for the Development of Reliability Standards." These principles, which include openness, transparency, consensus building, fair balance of interests, and due process, are discussed under criterion 5, below.

<sup>3</sup> *Rules Concerning Certification of the Electric Reliability Organization; Procedures for the Establishment, Approval and Enforcement of Electric Reliability Standards*, Order No. 672,

attributes of technically excellent reliability standards to be developed by NERC.<sup>4</sup> These essential attributes include<sup>5</sup>:

**Applicability:** Each reliability standard shall clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted; and shall identify the geographic applicability of the standard.<sup>6</sup>

**Reliability Objectives:** Each reliability standard must have a clear statement of purpose that describes how the standard contributes to the reliability of the bulk power system. Section 302.2 of the ROP lists the general objectives for the bulk power system that provide a foundation for determining the specific objective(s) of each reliability standard.<sup>7</sup>

1. *Reliability Planning and Operating Performance:* Bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions.

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FERC Stats. & Regs. ¶31,204 (2006), at P 258, 262, 325, 327; *Order Certifying North American Electric Reliability Corporation as the Electric Reliability Organization and Ordering Compliance Filing*, 116 FERC P 61,062 (*ERO Certification Order*), at PP 239, 241.

<sup>4</sup> In the *ERO Certification Order*, the Commission recognized that NERC's proposed ROP provided that the ten characteristics for technical excellence of a reliability standard must be met for a proposed reliability standard to be approved. *ERO Certification Order*, 116 FERC P 61,062, at P 235.

<sup>5</sup> The descriptions of the essential attributes that follow are summaries, not direct quotes from Section 302.

<sup>6</sup> The functional classes of entities, or reliability functions, have been developed through NERC's functional model of the bulk power system, and are defined in NERC's *Glossary of Terms Used in Reliability Standards* and *Statement of Compliance Registry Criteria*. Currently, the functional classes of entities are: Balancing Authorities, Distribution Providers, Generator Operators, Generator Owners, Interchange Authorities, Load-Serving Entities, Planning Authorities, Purchasing-Selling Entities, Reliability Coordinators, Resource Planners, Reserve Sharing Groups, Transmission Operators, Transmission Owners, Transmission Planners, and Transmission Service Providers.

<sup>7</sup> In the *ERO Certification Order*, the Commission recognized that NERC's proposed rules provided that the purpose of a reliability standard, or its reliability objective, should derive from one or more of these eight general objectives. *ERO Certification Order*, 116 FERC P 61,062, at P 236.

2. *Frequency and Voltage Performance:* The frequency and voltage of bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
3. *Reliability Information:* Information necessary for the planning and operation of reliable bulk power systems shall be made available to those entities responsible for planning and operating bulk power systems.
4. *Emergency Preparation:* Plans for emergency operation and system restoration of bulk power systems shall be developed, coordinated, maintained and implemented.
5. *Communications and Control:* Facilities for communication, monitoring, and control shall be provided, used, and maintained for the reliability of bulk power systems.
6. *Personnel:* Personnel responsible for planning and operating bulk power systems shall be trained and qualified, and shall have responsibility and authority to implement actions.
7. *Wide-Area View:* The reliability of the bulk power systems shall be assessed, monitored, and maintained on a wide-area basis.
8. *Security:* Bulk power systems shall be protected from malicious physical or cyber attacks.

**Performance Requirement or Outcome:** Each reliability standard must state one or more performance requirements, which if achieved by the applicable entities will provide for a reliable bulk power system, consistent with good utility practices and the public interest. The performance requirement(s) shall not be a “lowest common denominator” compromise, but instead shall achieve an objective that is the best approach for bulk power system reliability taking account of the costs and benefits of implementing the proposed standard.

**Measurability:** Each performance requirement (i) shall be stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by the requirement; and (ii) shall have one or more associated measures used to objectively evaluate compliance with the requirement. Further, if performance can be practically measured quantitatively, metrics shall be provided to determine satisfactory performance.

**Technical Basis in Engineering and Operations:** Each reliability standard shall be based on sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that field.

**Completeness:** Reliability standards shall be complete and self-contained, and shall not depend on external information to determine the required level of performance.



**Consequences for Noncompliance:** In combination with guidelines for penalties and sanctions and other ERO and Regional Entity compliance documents, the consequences of violating a standard are clearly presented to the entities responsible for compliance.

**Clear Language:** Each reliability standard shall be stated using clear and unambiguous language, such that responsible entities, using reasonable judgment and in keeping with good utility practices, are able to arrive at a consistent interpretation of required performance.

**Practicality:** Each reliability standard shall establish requirements that can be practically implemented by the responsible entities within the specified effective date and thereafter.

**Consistent Terminology:** To the extent possible, reliability standards shall use a set of standard terms and definitions that are approved through the reliability standards development process.<sup>8</sup>

In the *ERO Certification Order*, the Commission concluded that by specifying the eight general objectives for which a reliability standard must be intended, and by incorporating other requirements for reliability standards development into the essential attributes of technically excellent reliability standards, NERC's ROP satisfied the requirements of Order No. 672 for the ERO's reliability standards development process.<sup>9</sup>

The NERC RSDP also provides a template for, and specifies the performance elements of, a reliability standard.<sup>10</sup> The requirement that each standard contain these elements applies a systematic discipline in the development and revision of standards, in order to produce standards that are measurable, enforceable, and consistent. Use of the template specified in the RSDP allows for a clear statement of the purpose, requirements, measures, and compliance elements associated with each standard. The performance elements of a reliability standard, as specified in the RSDP, are as follows:

**Identification Number:** A unique identification number assigned in accordance with a published classification system to facilitate tracking and reference to the standards.

**Title:** A brief descriptive phrase identifying the topic of the standard.

**Applicability:** A clear identification of the functional classes of entities responsible for complying with the standard, noting any specific additions or exceptions.

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<sup>8</sup> In furtherance of the essential attribute of "Consistent Terminology," NERC has developed and maintains the *Glossary of Terms Used in Reliability Standards*, containing definitions of terms that are used in one or more reliability standards.

<sup>9</sup> *ERO Certification Order*, 116 FERC P 61,062 at PP 239, 241.

<sup>10</sup> NERC RSDP at 6-8.

**Effective date and status:** The effective date of the standard.

**Purpose:** The purpose of the standard, explicitly stating what outcome will be achieved by the standard.

**Requirement(s):** Explicitly stated technical, performance, preparedness, or certification requirements, with each requirement identifying who is responsible and what action is to be performed or outcome is to be achieved. Each statement in the requirements section is to be a statement for which compliance is mandatory.

**Risk Factors:** The potential reliability significance of each requirement of the standard, designated as a High, Medium, or Lower Risk Factor in accordance with criteria specified in the RSDP.

**Measure(s):** Each requirement of the standard is to be addressed by one or more measures, which are used to assess performance and outcomes for purposes of determining compliance with the requirements. Each measure is to identify to whom the measure applies and the expected level of performance or outcomes required to demonstrate compliance; and shall be tangible, practical, and as objective as is practical. Achieving the measure shall be a necessary and sufficient indicator that the associated requirement was met.

The NERC RSDP sets forth the detailed process steps for, and the detailed roles of the different persons and groups in, the development and approval of a new reliability standard or a revision to an existing standard. Under the ROP and the RSDP, the key groups involved in development of a proposed new reliability standard or revision to an existing standard are the Standards Committee, the Standards Authorization Request (SAR) Drafting Team, the Standard Drafting Team, and the Registered Ballot Body (RBB).

The Standards Committee is an elected body comprised of two members from each segment of the RBB.<sup>11</sup> The Standards Committee, with the assistance and facilitation of the professional staff of the NERC Reliability Standards Development Program, oversees the overall standards development process. The Standards Committee ensures that Standard Development Teams have the technical resources and capabilities required to develop technically sound standards that will gain industry support. Among other things, the Standards Committee determines whether SARs submitted by interested persons and entities should be pursued for development, and appoints members to SAR Drafting Teams and Standard Drafting Teams.<sup>12</sup> A SAR Drafting Team is a team of technical experts that, among other responsibilities, assists in

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<sup>11</sup> The segment organization of the RBB is set forth in detail in the NERC RSDP, and is described below in the discussion of criterion 5, “The ERO has established rules that provide reasonable notice and opportunity for public comment, due process, openness and balance of interests in developing reliability standards, and otherwise exercising its duties.”

<sup>12</sup> NERC ROP §306.

refining a SAR, and considers and responds to comments.<sup>13</sup> The Standard Drafting Team is a team of technical experts that develops the details of the proposed new or revised reliability standard, analyzes results of field tests of the standard (if any), and considers and responds to comments.<sup>14</sup> The RBB, which is open to any person or entity and is organized by industry segments, votes on the adoption or rejection of proposed reliability standards or revisions to existing standards.<sup>15</sup>

The RSDP also specifies roles in the standards development process for a NERC Standards Process Manager and the NERC standards process staff.<sup>16</sup> The Standards Process Manager administers the reliability standards development process, is responsible for ensuring that development and revision of standards is in accordance with the RSDP, works to ensure the integrity of the reliability standards development process and the consistency of quality and completeness of NERC reliability standards, and facilitates all steps in the standards development process. The NERC standards process staff assists the SAR Drafting Teams and the Standard Drafting Teams in carrying out the steps of the standards development process.

Through the technical expertise provided by the industry experts comprising the SAR Drafting Teams and Standard Drafting Teams, and the technical and administrative assistance provided by the NERC Standards Process Managers and the NERC standards process staff, and with the overall oversight and direction of the Standards Committee, the NERC standards development process ensures that the essential attributes of technically excellent reliability standards, including the accomplishment of one of the eight general reliability objectives specified in Section 302 of the ROP, are represented in each reliability standard that is developed or revised through the process and submitted to the NERC Board of Trustees and, ultimately, to the Commission for approval.

Although a substantial part of the work of reliability standards development under the NERC rules is performed by industry technical experts and other industry volunteers, the NERC Reliability Standards Development Program staff plays a significant role in reliability standards development. NERC has developed and maintained a professional and technical staff in its Reliability Standards Development Program and has provided for substantial resources for the Reliability Standards Development Program in its annual ERO business plans and budgets that have been submitted to and approved by the Commission pursuant to 18 C.F.R. §39.4(b) and (c). NERC's 2007 Business Plan and Budget, as approved by the Commission, provided for a staff of

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<sup>13</sup> NERC RSDP at 13.

<sup>14</sup> NERC RSDP at 13.

<sup>15</sup> NERC ROP §305; NERC RSDP at 11-12, 14, 21-24. Following successful balloting by the ballot pool, a proposed standard is submitted to the NERC Board of Trustees for approval, and if approved by the board, is filed with the Commission for approval in accordance with §215(d) of the FPA and 18 C.F.R. §39.5. NERC Bylaws, Article IX, Section 1; NERC ROP §§ 308.2, 308.3 and 309; NERC RSDP at 14 and 24.

<sup>16</sup> NERC RSDP at 12; see also NERC ROP §307.

12 full-time equivalent employees (FTEs) in the Reliability Standards Development Program.<sup>17</sup> Staffing for the Reliability Standards Development Program was increased to 15 FTE in the 2008 Business Plan and Budget.<sup>18</sup> In its 2009 Business Plan and Budget as originally submitted to the Commission, NERC budgeted for 14 FTE in the Reliability Standards Development Program for 2009;<sup>19</sup> however, in a revised Business Plan and Budget submitted to the Commission on December 15, 2008, NERC proposed to increase staffing for this program in 2009 to 14.5 FTE, and also to use significant additional consultant resources in this program during 2009, including to provide additional subject matter expertise for certain standards development projects to supplement the subject matter expertise available in the Reliability Standards Development Program staff.<sup>20</sup> NERC's budgeted direct expenses for the Reliability Standards Development Program in its approved 2007 and 2008 Business Plans and Budgets and its revised 2009 Business Plan and Budget have been as follows<sup>21</sup>:

<u>Year</u>	<u>Amount</u>	<u>Increase over 2007</u>
2007:	\$2,258,433	--
2008:	\$3,118,592	38.1%
2009:	\$3,599,454	59.4%

Thus, NERC has increased its budgeted resources (direct expenses) for the Reliability Standards program by 59 percent from 2007 to 2009.

Using the reliability standards development process, and with the resources described above, NERC has developed and submitted to the Commission a total of 95 continent-wide reliability standards that, as of May 31, 2009, have been approved by the Commission pursuant to §215(d) of the FPA and 18 C.F.R. §39.5 to be mandatory and enforceable. NERC has also approved and submitted to the Commission, and the Commission has approved, a total of nine Regional reliability standards as of May 31, 2009. The continent-wide reliability standards that

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<sup>17</sup> See *NERC 2007 Business Plan and Budget* at 5 and 35.

<sup>18</sup> See *NERC 2008 Business Plan and Budget* at 6.

<sup>19</sup> See *NERC 2009 Business Plan and Budget* at 8 and 75.

<sup>20</sup> See *Compliance Filing of the North American Electric Reliability Corporation in Response to October 16, 2008 Order on 2009 Business Plans and Budgets*, filed December 15, 2008 in Docket Nos. RR08-6 and RR07-14 (*December 2008 Budget Compliance Filing*), at 7-12 and Attachment 1.

<sup>21</sup> See 2007 Business Plan and Budget at 5 and Appendix A at 1; 2008 Business Plan and Budget at 6; *December 2008 Budget Compliance Filing*, Attachment 1. The amounts cited are direct expenses only and do not include NERC indirect expenses (General and Administrative, Information Technology, Legal and Regulatory, Human Resources, and Finance and Accounting) allocated to the Reliability Standards Development Program.

have been developed by NERC and approved by the Commission cover the full range of reliability objectives specified in Section 302 of the NERC ROP:

- Resource and Demand Balancing (6 approved standards)
- Communications (2 approved standards)
- Critical Infrastructure Protection (9 approved standards)
- Emergency Preparedness and Operations (8 approved standards)
- Facilities Design, Connections and Maintenance (9 approved standards)
- Interchange Scheduling and Coordination (9 approved standards)
- Interconnection Reliability Operations and Coordination (9 approved standards)
- Modeling, Data, and Analysis (10 approved standards)
- Nuclear (1 approved standard)<sup>22</sup>
- Personnel Performance, Training and Qualifications (4 approved standards)
- Protection and Control (14 approved standards)
- Transmission Operations (8 approved standards)
- Transmission Planning (4 approved standards)
- Voltage and Reactive Power (2 approved standards)

NERC's success to date in developing reliability standards that the Commission has approved as mandatory and enforceable demonstrates NERC has, and has exercised, the ability to develop reliability standards that provide for an adequate level of reliability of the bulk power system.

The approved reliability standards are structured in accordance with the template and performance elements specified in the RSDP. Each approved reliability standard contains the following clearly identified sections and subsections:

- **Applicability** — stating the title of the standard, its identification number, its purpose, the reliability functional entities to which it is applicable, and its effective date.
- **Requirements**
- **Measures**
- **Compliance** — stating the entity responsible for monitoring compliance; the compliance monitoring period and reset timeframe; data retention requirements for

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<sup>22</sup> The one Nuclear Plant Interface standard that has been approved by the Commission becomes mandatory and effective on April 1, 2010.

the registered entities; the levels of noncompliance for specified types of violations of the standard.

- **Regional Differences**, if any.

NERC systematically manages the development of new standards and revisions to standards, in areas of highest need and importance, through its rolling three-year Reliability Standards Development Plans. The Standards Development Plan identifies and prioritizes the reliability standards development projects in the immediate three-year time horizon. The three-year Standards Development Plan is revised annually, based on input from NERC staff, the Standard Drafting Teams, the NERC technical committees and subgroups, other industry participants, and government authorities, to look ahead an additional year. The annual Standards Development Plan revision considers perceived gaps in NERC's Reliability Standards and proposals for closing those gaps; timing priorities of the projects in the Standards Development Plan and recommendations for adjusting the timing of individual projects; and potential new projects for development of new standards or revisions to existing standards. The three-year rolling Reliability Standards Development Plan, as revised each year, is submitted to the NERC board for approval and then filed with the Commission for information.

NERC's three-year Reliability Standards Development Work Plan for 2008–2010 contemplated 35 standards development projects during this period. The 2009–2011 Reliability Standards Development Work Plan includes 39 standards development projects.

### **Enforcement of Reliability Standards**

NERC's program for monitoring and enforcing compliance with Commission-approved reliability standards is implemented through its Compliance Registry, Section 400 of its ROP, its Compliance Monitoring and Enforcement Program (CMEP), which is Appendix 4C to the ROP, its *Sanction Guidelines*, which is Appendix 4B to the ROP, and its delegation agreements with the eight Regional Entities.<sup>23</sup>

Section 6(a) of NERC's delegation agreements with the Regional Entities specifies that the Regional Entity shall enforce reliability standards within its geographic boundaries through the compliance enforcement program set forth in Exhibit D to the Agreement, and that the Regional Entity's compliance enforcement program meets all applicable requirements of the FPA, Commission Order No. 672, and the Commission's regulations, including, *inter alia*, the requirement for an audit program pursuant to 18 C.F.R. §39.7(a), the assessment of penalties pursuant to 18 C.F.R. §39.7(c) through 39.7(g), and the requirements for due process. Additionally, Section 6(d) of the delegation agreements requires the Regional Entity to maintain the capability to conduct investigations of potential violations of reliability standards and to

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<sup>23</sup> The delegation agreements were originally approved by the Commission in an order issued April 19, 2007 (*Order Accepting ERO Compliance Filing, Accepting ERO/Regional Entity Delegation Agreements, and Accepting Regional Entity 2007 Business Plans*, 119 FERC ¶61,060 (2007)), subject to various compliance requirements, which have been addressed in subsequent compliance filings and Commission orders.

conduct such investigations in a confidential manner, and Section 6(e) requires the Regional Entity to maintain a program of proactive enforcement audits including procedures for spot-checks of self-reported compliance and periodic audits of all Registered Entities.

Through the NERC Organization Registration process, NERC and the Regional Entities have identified users, owners, and operators of the bulk power system that are obligated to comply with Commission-approved NERC Reliability Standards.<sup>24</sup> Sections 501 and 507 of the NERC ROP govern the registration of users, owners and operators of the bulk power system as responsible for compliance with the requirements of reliability standards that are applicable to the reliability function for which the entity is registered. The purpose of the NERC Compliance Registry, established pursuant to Section 501 of the ROP, is to clearly identify those entities that are responsible for compliance with reliability standards. The Compliance Registry identifies, and sets forth the reliability functions to be performed by, each organization responsible for meeting the requirements of reliability standards. Organizations listed in the Compliance Registry are responsible for knowing the contents of, and complying with, standards applicable to the reliability function(s) for which the entity is registered.<sup>25</sup> The criteria upon which users, owners and operators of the bulk power system will be registered for one or more reliability functions are specified in Section 501 of the ROP and in NERC's Commission-approved *Statement of Compliance Registry Criteria*.

Typically, a user, owner or operator of the bulk power system is identified, in the first instance, for placement on the Compliance Registry by the Regional Entity in whose territory the user, owner or operator is located. Upon the entity being notified by NERC that it is being placed on the Compliance Registry, the entity may challenge its inclusion on the Compliance Registry by filing a written objection with NERC.<sup>26</sup> Challenges to inclusion on the Compliance Registry are heard and decided by the NERC Board of Trustees Compliance Committee (BOTCC). If the entity is not satisfied with the decision of the BOTCC, the entity may appeal the registration determination to the Commission.<sup>27</sup> NERC may remove a registered entity from the Compliance Registry for one or more of the reliability functions for which the entity is listed, based on changed circumstances. The grounds for de-listing may be identified by NERC or may

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<sup>24</sup> Section 215(b)(2) of the FPA requires all users, owners and operators of the bulk power system to comply with reliability standards approved by the Commission. Similarly, the Commission's regulations at 18 C.F.R. §39.2 and §40.2 require all users, owners and operators of the bulk power system to comply with applicable reliability standards and applicable rules of the ERO and Regional Entities approved by the Commission.

<sup>25</sup> NERC ROP §501. The current categories of reliability functional entities are listed in footnote 6 above and in the NERC *Statement of Compliance Registry Criteria*.

<sup>26</sup> A user, owner or operator of the bulk power system may be listed on the Compliance Registry for several reliability functions. A registered entity may challenge its listing for one or more of the reliability functions for which it has been registered while accepting its listing for other reliability function(s).

<sup>27</sup> The registration, challenge, and appeal process described in this paragraph is set forth in Section 501.1.3 of the NERC ROP.

be brought to NERC's attention by the Registered Entity or by the applicable Regional Entity.<sup>28</sup> As of June 22, 2009, there were 1,839 organizations listed on the NERC Compliance Registry, registered for 4,487 reliability functions.

Monitoring and enforcement of compliance with reliability standards is primarily conducted by the eight NERC Regional Entities, pursuant to Section 401.4 of the NERC ROP and the delegation agreements between NERC and the Regional Entities. Each Regional Entity is responsible for compliance monitoring and enforcement activities within its regional footprint.<sup>29</sup> The NERC ROP provide for NERC to take responsibility for CMEP activities where a Regional Entity is unable to perform those functions, as well as to be responsible for overseeing the CMEP activities of the Regional Entities.<sup>30</sup> Section 403 of the NERC ROP prescribes in detail the required attributes of Regional Entity compliance programs, covering compliance program structure, compliance program resources, and compliance program design. Section 403 emphasizes the requirement that the Regional Entity's governance of its compliance program, and its compliance program staff, be independent.<sup>31</sup> Each Regional Entity must annually develop, and submit to NERC for approval, a Regional Entity Compliance Enforcement Implementation Plan that identifies the reliability standards to be actively monitored by the Regional Entity (both those required by NERC and any additional standards the Regional Entity proposes to monitor), and how the identified standards will be monitored, evaluated, reported, sanctioned, and appealed.<sup>32</sup> In its annual Implementation Plan, each Regional Entity must also report to NERC how the Regional Entity carried out its delegated compliance enforcement authority in the previous year, the effectiveness of its CMEP, and changes expected to correct any identified deficiencies.<sup>33</sup>

NERC is required to conduct an audit, at least once every three years, to evaluate how each Regional Entity implements the NERC CMEP. The evaluation is to be based on the NERC ROP including the NERC CMEP, the delegation agreement with the Regional Entity, the approved Regional Entity annual Compliance Enforcement Program Implementation Plans, and the required CMEP attributes. NERC must provide its evaluations to the Commission and other appropriate ERO governmental authorities, to demonstrate the effectiveness of each Regional Entity in compliance monitoring and enforcement.<sup>34</sup> With the Regional Entity delegation

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<sup>28</sup> NERC ROP §501.1.3.6.

<sup>29</sup> NERC ROP §401.4.

<sup>30</sup> NERC ROP §§401.5, 402 and 404.

<sup>31</sup> NERC ROP §§403.1 and 403.6.

<sup>32</sup> NERC ROP §403.21.

<sup>33</sup> NERC ROP §403.21.1.

<sup>34</sup> NERC ROP §402.1.3. The audit procedure for NERC's audits of the Regional Entity CMEPs is contained in *Audit of Regional Entity Compliance Programs*, Appendix 4A to the NERC ROP.



agreements having been approved by the Commission in April 2007, NERC is commencing its initial round of triennial audits of Regional Entity CMEPs in 2009.

The controlling document for NERC's compliance monitoring and enforcement activities is the NERC uniform CMEP, Appendix 4C to the ROP. Pursuant to Exhibit D to its delegation agreement with NERC, each Regional Entity has adopted the uniform CMEP or a modified version of the CMEP; in the latter cases the modified CMEP, or an enumeration of any deviations in the Regional Entity's CMEP from the uniform CMEP, is included in Exhibit D to the Regional Entity's delegation agreement. The uniform CMEP and the modified CMEPs used by certain Regional Entities have all been approved by the Commission.<sup>35</sup> The uniform CMEP and Regional Entity CMEPs provide for compliance monitoring and enforcement activities to be carried out through eight processes: (i) audits of Registered Entities for compliance with reliability standards,<sup>36</sup> (ii) self certifications by Registered Entities of their compliance with standards,<sup>37</sup> (iii) spot checking of Registered Entities' compliance with standards,<sup>38</sup> (iv) compliance violation investigations (CVIs), which may be conducted and led by the Regional Entity or by NERC,<sup>39</sup> (v) self-reporting by Registered Entities of violations of standards,<sup>40</sup> (vi) periodic data submittals by Registered Entities as requested by the Compliance Enforcement Authority (CEA),<sup>41</sup> (vii) exception reporting by Registered Entities,<sup>42</sup> and (viii) investigation of complaints.<sup>43</sup> The uniform CMEP and the Regional Entity CMEPs set forth detailed process

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<sup>35</sup> The Commission initially approved the uniform CMEP and modified CMEPs adopted by certain Regional Entities in their respective delegation agreements, subject to various compliance requirements, in its Order issued April 19, 2007. *Order Accepting ERO Compliance Filing, Accepting ERO/Regional Entity Delegation Agreements, and Accepting Regional Entity 2007 Business Plans*, 119 FERC ¶61,060 (2007). Subsequent Commission orders have approved modifications to the uniform CMEP and Regional Entity CMEPs (both modifications in response to Commission directives and modifications initiated by NERC and/or Regional Entities). *Order Addressing Revised Delegation Agreements*, 122 FERC ¶61,245 (2008); *Order Accepting Compliance Filings, Subject to Conditions*, 125 FERC ¶61,330 (2008); *Order on Compliance Filing*, 127 FERC ¶61,209 (2009).

<sup>36</sup> NERC uniform CMEP §3.1.

<sup>37</sup> NERC uniform CMEP §3.2.

<sup>38</sup> NERC uniform CMEP §3.3.

<sup>39</sup> NERC uniform CMEP §3.4.

<sup>40</sup> NERC uniform CMEP §3.5.

<sup>41</sup> NERC uniform CMEP §3.6. The CEA is the entity (either NERC or the Regional Entity, as applicable) responsible for monitoring and enforcing the registered entity's compliance with reliability standards. Uniform CMEP §1.1.7.

<sup>42</sup> NERC uniform CMEP §3.7.

<sup>43</sup> NERC uniform CMEP §3.8.

steps for each of the eight compliance monitoring and enforcement processes, including requirements for the results of the processes to be reported by the Regional Entity (CEA) to NERC and ultimately to the Commission. The process steps as detailed in the uniform CMEP and Regional Entity CMEPs include appropriate steps for avoidance of conflicts of interest,<sup>44</sup> preservation of confidentiality,<sup>45</sup> and provision of notice, opportunity to respond, and other due process for the Registered Entity.<sup>46</sup>

As specified by Section 4.1 of the uniform CMEP, NERC develops and posts an annual CMEP Implementation Plan each year. The annual NERC CMEP Implementation Plan specifies, among other information, the reliability standards to be actively monitored during the upcoming year and the compliance process(es) to be used by the CEAs to monitor each reliability standard. The annual NERC CMEP Implementation Plan is used by the Regional Entities in developing their individual annual regional Compliance Enforcement Program Implementation Plans.

The uniform CMEP also specifies the processes to be followed when an alleged violation of a reliability standard by a Registered Entity is identified,<sup>47</sup> including notification to the Registered Entity of an alleged violation and the required contents of the notice;<sup>48</sup> the Registered

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<sup>44</sup> For example, the Registered Entity is notified in advance of a compliance audit as to the members of the audit team (who are required to be free of conflicts of interest) and their backgrounds and is given the opportunity to object to individual members of the audit team on grounds of a conflict of interest or other circumstance that could interfere with the team member's impartial performance of his or her duties. NERC uniform CMEP, §3.1.5. Similar notice and opportunity to object is provided with respect to spot checking teams (*id.* §3.3.1) and CVI teams (*id.* §3.4.1). In addition, Section 6(g) of the NERC-Regional Entity delegation agreements requires the Regional Entity to maintain a conflict of interest policy that assures the integrity of its compliance enforcement program and the independence of the compliance program staff from those subject to enforcement actions.

<sup>45</sup> NERC uniform CMEP §§2.0 and 9.3. In addition, Section 6(c) of the NERC-Regional Entity delegation agreements specifies that each violation or alleged violation of a reliability standard shall be treated as nonpublic until the matter is filed with the Commission as a notice of penalty or resolved by an admission that the owner, operator, or user of the bulk power system violated a reliability standard or by a settlement or other negotiated disposition.

<sup>46</sup> For example, the CEA must notify the Registered Entity in advance of a compliance audit as to the reliability standards to be covered by the audit, and must provide a pre-audit questionnaire to the Registered Entity at least two months before commencement of the audit. NERC uniform CMEP §3.1.1. At the conclusion of the audit, the compliance audit team is required to provide a draft audit report to the Registered Entity for comment. *Id.* §3.1.6. Similarly, in the spot check and periodic data submittal processes, the CEA is required to provide its draft assessment of compliance to the Registered Entity for comment. *Id.* §3.3.1 and §3.6.1.

<sup>47</sup> NERC uniform CMEP §5.0.

<sup>48</sup> NERC uniform CMEP §5.1.

Entity's response to the notice of alleged violation;<sup>49</sup> the opportunity for the Registered Entity to obtain a hearing on the alleged violation and/or proposed penalty or sanction before the CEA hearing body;<sup>50</sup> the process the Registered Entity may engage in to negotiate a settlement with the CEA;<sup>51</sup> the Registered Entity's right to appeal a hearing body decision to NERC;<sup>52</sup> and the process for reporting a penalty or sanction to the Commission for confirmation.<sup>53</sup>

The uniform CMEP requires that a Registered Entity found to be in violation of a reliability standard must file with the CEA a Mitigation Plan to correct the violation, or a description of how the violation has been mitigated.<sup>54</sup> The uniform CMEP describes the required contents of the Registered Entity's proposed Mitigation Plan,<sup>55</sup> the processes for submittal of the proposed Mitigation Plan by the Regional Entity<sup>56</sup> and for review and acceptance or rejection of the proposed Mitigation Plan by the Regional Entity and review and approval or disapproval by NERC (and, in the latter event, modification of the Mitigation Plan by the Registered Entity);<sup>57</sup> the timetable for completion of an accepted Mitigation Plan;<sup>58</sup> and the process for completion and confirmation by the CEA of implementation of the Registered Entity's Mitigation Plan.<sup>59</sup> Key components required by the uniform CMEP to be in any Mitigation Plan are the Registered Entity's action plans to correct the violation(s) and to prevent recurrence.<sup>60</sup>

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<sup>49</sup> NERC uniform CMEP §5.2.

<sup>50</sup> NERC uniform CMEP §5.3 and Attachment 2, Hearing Procedures. Attachment 2 sets forth the detailed procedures for the hearing to be conducted before the CEA hearing body should a Registered Entity dispute a notice of alleged violation, proposed penalty or sanction, proposed Mitigation Plan, or a Remedial Action Directive.

<sup>51</sup> NERC uniform CMEP §5.4.

<sup>52</sup> Uniform CMEP §5.5. The NERC appeal process is addressed in §407.3 and §410 of the NERC ROP.

<sup>53</sup> NERC uniform CMEP §5.6.

<sup>54</sup> NERC uniform CMEP §6.1.

<sup>55</sup> NERC uniform CMEP §6.2.

<sup>56</sup> NERC uniform CMEP §6.4.

<sup>57</sup> NERC uniform CMEP §6.5.

<sup>58</sup> NERC uniform CMEP §6.3.

<sup>59</sup> NERC uniform CMEP §6.6.

<sup>60</sup> NERC uniform CMEP §6.2.

Additionally, the uniform CMEP provides the procedure for the CEA to issue a Remedial Action Directive to a Registered Entity.<sup>61</sup> A Remedial Action Directive may be issued, when immediately necessary to protect the reliability of the bulk power system from an imminent threat, to a Registered Entity the CEA believes is committing or has committed a violation of a reliability standard. The Remedial Action Directive may include, but is not limited to, specifying operating or planning criteria, limits or limitations; requiring specific system studies; defining operating practices or guidelines; requiring confirmation of data, practices or procedures through inspection, testing or other methods; requiring specific training for personnel; requiring development of specific operating plans; directing a Registered Entity to develop and comply with a plan to remediate a violation; imposing increased auditing or additional training requirements; and requiring the Registered Entity to cease an activity that may constitute a violation of a reliability standard.<sup>62</sup>

As a key component of the enforcement of compliance with mandatory reliability standards, a violation of a standard can result in the imposition of a financial penalty or other penalty or sanction on the Registered Entity. NERC has established, and is applying, rules and procedures for determining the amount of financial penalties, or other penalties or sanctions, to be imposed on Registered Entities for violations of standards. These rules and procedures are embodied in the NERC *Sanction Guidelines*, which is Appendix 4B to the NERC ROP. The *Sanction Guidelines* must be followed by the Regional Entities in the implementation of their CMEPs.<sup>63</sup> Penalties and sanctions must bear a reasonable relation to the seriousness of the violation and take into consideration timely remedial efforts by the Registered Entity.<sup>64</sup> NERC's rules and procedures for determining appropriate penalties and sanctions for violations of reliability standards are discussed in greater detail below under criterion 4, "The ERO has established rules that provide fair and impartial procedures for enforcement of reliability standards through the imposition of penalties in accordance with 18 C.F.R. §39.7, including limitations on activities, operations, or other appropriate sanctions or penalties."

In order to carry out their responsibilities to monitor and enforce compliance with reliability standards, NERC and the Regional Entities, over the period from 2007 to date, have developed substantial professional staffs for, and are devoting substantial resources to, their

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<sup>61</sup> NERC uniform CMEP §7.0. A Remedial Action Directive is "an action (other than a penalty or sanction) required by a Compliance Enforcement Authority that (1) is to bring a Registered Entity into compliance with a Reliability Standard or to avoid a Reliability Standard violation, and (2) is immediately necessary to protect the reliability of the bulk power system from an imminent threat." NERC uniform CMEP §1.1.18.

<sup>62</sup> NERC uniform CMEP §7.0.

<sup>63</sup> NERC ROP §§403.17 and 407.

<sup>64</sup> NERC ROP §401.7.

CMEP and Organization Registration Programs. The following table shows the direct expenses and the numbers of FTE staff budgeted by NERC and each Regional Entity for 2008 and 2009.<sup>65</sup>

Entity	2008 Budgeted FTEs	2008 Budgeted Direct Expense	2009 Budgeted FTEs	2009 Budgeted Direct Expense
<b>NERC</b>	26.0	\$4,669,493	35.5*	\$7,358,536*
<b>FRCC</b>	7.20	\$1,218,578	9.26	\$2,019,650
<b>MRO</b>	9.65	\$1,453,770	10.0	\$2,071,510
<b>NPCC</b>	7.50	\$1,727,832	9.0	\$2,095,204
<b>ReliabilityFirst</b>	12.0	\$3,374,181	23.0	\$5,099,328
<b>SERC</b>	14.2	\$3,393,665	21.5	\$4,805,617
<b>SPP RE</b>	3.50	\$807,884	6.0#	\$1,283,653
<b>Texas RE</b>	6.40	\$892,898	14.15	\$1,628,935
<b>WECC</b>	20.0	\$4,568,116	30.0	\$6,165,303
<b>Totals</b>	106.45	\$22,106,417	158.41	\$32,527,736

\*Revised budget submitted to the Commission on December 15, 2008.

#Does not include 2 FTE contractors in SPP RE's Compliance Program budget.

NERC and the Regional Entities have increased their CMEP and Organization Registration Program staffs and budgets from 2007 to 2009 as the needs and complexities of operating the compliance programs have been realized through experience. In fact, from 2008 to 2009, NERC and the Regional Entities increased their aggregate budgeted Compliance Program staffing by 49 percent and their aggregate budgeted Compliance Program direct expenditures by 47 percent. In addition to their compliance program staffs, NERC and a number of the Regional Entities have also made use of consultants and contractors to assist in compliance audits, CVIs, and other compliance monitoring and enforcement activities, and to provide subject matter expertise as needed to supplement the expertise of their staffs. For example, NERC's revised 2009 budget for its CMEP and Organization Registration Program includes \$1,100,000 for consultants to supplement NERC Compliance Program staff resources.

The Statements of Activities and Achievements of the individual Regional Entities, included in **Attachment 4** of this three-year assessment report, detail the cumulative numbers of possible violations of reliability standards reviewed, notices of alleged violations and notices of

<sup>65</sup> Except as noted, data in this table is taken from the NERC and Regional Entity 2009 Business Plans and Budgets filed with the Commission on August 22, 2008, and conditionally accepted by the Commission in its Order issued October 16, 2008. *North American Electric Reliability Corp., Order Conditionally Accepting 2009 Business Plan and Budget of the North American Electric Reliability Corporation and Ordering Compliance Filings*, 125 FERC ¶61,056 (2008). The direct expenses shown in the table are the budgeted direct expenses of each entity for personnel costs (salary and benefits), meeting expenses (including travel costs), and operating expenses (including expenses for consultants, contracts, professional services, office rent, and office and related costs) for its CMEP and Organization Registration Program, but do not include allocations of the entity's indirect costs (general and administrative, legal and regulatory, human resources, information technology, and finance and accounting) to the program.

confirmed violations filed, and numbers of Mitigation Plans received, accepted, approved, and verified as complete, by each Regional Entity through May 31, 2009, as well as other quantitative data on their CMEP and Organization Registration Programs during this period. As of June 2009, the Regional Entities have conducted or planned 444 compliance audits in 2009:

FRCC:	20	ReliabilityFirst:	66	Texas RE:	45
MRO:	34	SERC:	61	WECC:	107
NPCC:	76	SPP RE	35		

NERC has participated in some Regional Entity compliance audits and will continue to do so as an observer to observe the performance of audits by the Regional Entities and to help ensure consistent implementation and application of the CMEP and consistent application of the requirements of standards across the Regional Entities.

The foregoing discussion amply demonstrates that NERC has developed and is implementing the ability to develop and enforce reliability standards that provide for an adequate level of reliability of the bulk power system.

**2. The ERO has established rules that assure its independence of users, owners and operators of the bulk power system while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any ERO committee or subordinate organizational structure.**

This criterion encompasses three distinct considerations: (1) independence of NERC from users, owners and operators of the bulk power system, (2) fair stakeholder representation in the selection of NERC’s directors (trustees), and (3) provision for balanced decision-making in any NERC committee or subordinate organizational structure.

**Independence of users, owners and operators of the bulk power system**

NERC’s Bylaws provide that NERC’s business and affairs shall be managed by a Board of Trustees.<sup>66</sup> The Bylaws provide that the Board of Trustees shall consist of ten independent trustees plus the President of NERC.<sup>67</sup> The Bylaws define “independent trustee” as follows:

An independent trustee is a person (i) who is not an officer or employee of the Corporation [*i.e.*, NERC], a member or an officer, director, or employee of a member of the Corporation, or 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 (ii) who does not have any other relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a trustee. Provided, that upon initial election to the board, an independent trustee shall within ten (10) days terminate any employee, officer, or

<sup>66</sup> NERC Bylaws Article III, §1.

<sup>67</sup> NERC Bylaws Article III, §1.

director position that conflicts with this subparagraph and shall within sixty (60) days terminate any financial interest or other relationship that conflicts with this subparagraph, and prior to such termination shall not participate in discussion of or voting on any matter involving the entity of which the trustee is an employee, officer or director or in which the trustee has the financial interest or other relationship giving rise to the conflict.<sup>68</sup>

In the *ERO Certification Order*, the Commission found that the NERC Bylaws definition of “independent trustee” was sufficient to provide for independence from users, owners and operators of the bulk power system, subject to one clarification.<sup>69</sup>

Thus, a NERC trustee cannot be an officer, director, or employee of a member of NERC nor of any other entity that would be perceived as having a direct financial interest in the outcome of board decisions, and may not have any other relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a trustee. The “responsibilities of a trustee” include, among other things, voting on (i) board approval of proposed reliability standards,<sup>70</sup> (ii) board approval of the NERC ROP and amendments to the ROP,<sup>71</sup> and (iii) board approval of NERC and Regional Entity Budgets.<sup>72</sup> Committees of the NERC board, such as the Board of Trustees Compliance Committee, are responsible for decisions such as hearing and deciding challenges by a user, owner or operator of the bulk power

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<sup>68</sup> NERC Bylaws Article III, §3a. The last sentence of §3a, providing for brief time periods for a newly-elected trustee to terminate any employment, officer or director position or financial interest or other relationship that would prevent the trustee from being independent, is a 2008 amendment to the Bylaws that was approved by the Commission by a letter order issued October 7, 2008 in Docket No. RR08-5-000.

<sup>69</sup> *ERO Certification Order*, 116 FERC ¶61,062, at P 42. The clarification is that the definition prohibits an independent trustee from having a relationship that would interfere with his or her exercise of independent judgment in carrying out the responsibilities of a trustee, regardless of whether he or she is an officer, director or employee of an entity with an interest in the outcome of NERC Board decisions. *Id.* NERC confirmed this clarification in a compliance filing dated September 18, 2006, and made a modification, consistent with the clarification, to the definition of “independent trustee” in its Bylaws. *Compliance Filing of the North American Electric Reliability Council and the North American Electric Reliability Corporation Addressing Governance Issues and Request for Expedited Treatment*, Docket No. RR06-1, filed September 18, 2006 (*NERC ERO Governance Compliance Filing*) at 3-4.

<sup>70</sup> NERC Bylaws Article IX, §1; NERC ROP §308.2.

<sup>71</sup> NERC Bylaws Article XI, §2; NERC ROP §1402.

<sup>72</sup> NERC Bylaws Article XIII, §§ 2, 3, 4 and 5; NERC ROP §1101. Each of the matters just listed, upon being approved by the NERC Board of Trustees, must then be submitted to the Commission for approval or confirmation. Sections 215(d) and (f) of the FPA and 18 C.F.R. §§39.4(b), (c) and (d) and 39.5.

system to placement of the entity on the Compliance Registry,<sup>73</sup> hearing and deciding appeals from a Regional Entity Hearing Body decision on a Registered Entity's challenge to a notice of alleged violation of a reliability standard and/or proposed penalty or sanction,<sup>74</sup> and approving the imposition of penalties or other sanctions for violations of reliability standards on Registered Entities, including by settlements.

In addition, the NERC Code of Conduct for Trustees, Officers, and Employees (NERC Representatives) specifies that NERC Representatives "shall avoid or refrain from involvement in or situations where there is actually a conflict of interest ("Conflict"). A Conflict arises where the NERC Representative's personal financial interest is significantly affected by, or may reasonably appear to be significantly affected by, his or her actions or decisions in his or her capacity at NERC."

**Fair stakeholder representation in the selection of NERC's trustees**

NERC's Bylaws provide for fair stakeholder representation in the selection of NERC's trustees. Candidates for election as a trustee are selected by a nominating committee. The nominating committee is appointed annually (or more frequently if needed in the event of a special election to fill a board vacancy) by the board. The nominating committee is to consist of those independent trustees whose terms do not expire during the current year and such number of other persons with such qualifications as the board shall specify, including at least three members of the NERC Member Representatives Committee (MRC).<sup>75</sup> The procedures to be followed by the nominating committee must include a means of permitting members of NERC to recommend to the nominating committee candidates for consideration as nominees for independent trustees.<sup>76</sup> NERC's Bylaws specify that the nominating committee "shall endeavor to nominate candidates for election to the board consistent with the objectives that the board as an entity reflects expertise in the areas of technical electric operations and reliability, legal, market, financial, and regulatory matters, and familiarity with regional system operations issues; and reflects geographic diversity."<sup>77</sup>

NERC's Bylaws provide that the independent trustees shall be elected by the NERC MRC, from nominees proposed by the nominating committee. To be elected an independent trustee, a nominee must receive the affirmative vote of two-thirds of the members of the MRC.<sup>78</sup>

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<sup>73</sup> NERC ROP §501.1.3.

<sup>74</sup> NERC ROP §410.

<sup>75</sup> NERC Bylaws Article III, §5.

<sup>76</sup> NERC Bylaws Article III, §5.

<sup>77</sup> NERC Bylaws Article III, §5.

<sup>78</sup> NERC Bylaws Article III, §6. The NERC Bylaws also require that the number of trustees from Canada shall not be less than the percentage of the net energy for load (NEL) of Canada to the total NEL of the United States and Canada, times eleven, rounded up to the nearest whole



The MRC is comprised of representatives from the various sectors of the NERC membership.<sup>79</sup> As specified by Article II, §4 of the NERC Bylaws, the sectors of the NERC membership are (i) investor-owned utilities, (ii) state/municipal utilities, (iii) cooperative utilities, (iv) federal or provincial utilities/power marketing administrations, (v) transmission-dependent utilities, (vi) merchant electricity generators, (vii) electricity marketers, (viii) large end-use electricity customers, (ix) small end-use electricity customers, (x) independent system operators/regional transmission organizations, (xi) regional entities, and (xii) government representatives.<sup>80</sup> The composition of the MRC, as specified in Article VIII, §2 of the NERC Bylaws, is as follows:

- (i) two representatives from each sector except the government representatives sector and the regional entity sector;
- (ii) two voting representatives from the regional entity sector, with the remaining members of that sector being non-voting members of the MRC;<sup>81</sup>
- (iii) the chairman and vice-chairman of the MRC;<sup>82</sup>

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number, with the management trustee (i.e., the president of NERC) counted as a trustee from Canada if he or she is a Canadian citizen. NERC Bylaws Article III, §2a. In the *ERO Certification Order*, the Commission approved this provision as “adequately providing for an international ERO,” stating that “appropriate country representation helps to ensure that the ERO is truly international in addressing Bulk Power System reliability and considering the concerns of stakeholders in each of these countries.” *ERO Certification Order*, 116 FERC ¶61,062, at P 47.

<sup>79</sup> Membership in NERC is voluntary and is open to any person or entity that has an interest in the reliable operation of the North American bulk power system, registers as a member, and complies with the other conditions of membership specified in the NERC Bylaws (which do not include payment of any membership or initiation dues or fees). NERC Bylaws Article II, §1. In the *ERO Certification Order*, the Commission stated the availability of membership to any person or entity with an interest in the reliable operation of the North American bulk power system created an open membership structure that is consistent with the statutory requirement that the ERO establish rules that assure fair stakeholder representation. *ERO Certification Order*, 116 FERC ¶61,062, at P 54. Each member is assigned to one of the 12 membership sectors of NERC. NERC Bylaws Article II, §4.

<sup>80</sup> Article III, §6 of the NERC Bylaws specifies the types of persons or organizations that would be included in each of the membership sectors.

<sup>81</sup> The representation of Regional Entities in the MRC reflects changes made by NERC to the originally-proposed composition of the MRC in response to concerns expressed by the Commission in P 75 of the *ERO Certification Order*. See *NERC ERO Governance Compliance Filing* at 6-9. The Commission accepted these changes in an Order issued October 30, 2006. The Commission also accepted the overall structure and composition of the MRC in that Order. *North American Electric Reliability Corporation, Order on Petitions for Rehearing and Clarification; Order on Compliance Filing*, 117 FERC ¶61,126 (2006), at PP 30 and 44.

(iv) any additional Canadian representatives as are selected pursuant to Article VIII, §4 of the Bylaws;<sup>83</sup> and

(v) the following representatives of the government representatives sector: two representatives of the United States federal government, one representative of the Canadian federal government, two representatives of state governments, and one representative of a provincial government, all of whom shall be non-voting members of the MRC except the two representatives of state government.

The MRC is therefore comprised of 26 voting members when at full complement (or more if the election of additional Canadian members has been necessary in accordance with Article VIII, §4 of the Bylaws). The members of the MRC from each sector are nominated from, and elected by, the NERC members in that sector pursuant to the processes specified in Article VIII, §3 of the NERC Bylaws, which generally call for election of the two candidates from each sector receiving the highest numbers of votes in the sector. The members of the MRC are elected annually (or between annual elections if needed to fill a vacancy).<sup>84</sup>

In summary, NERC's trustees are nominated by a nominating committee comprised of independent trustees whose terms are not expiring, members of the MRC, and possibly others, and elected by two-thirds vote of the MRC, which is a committee established pursuant to the Bylaws to fairly represent the sectors of NERC's membership, which is open to any person or entity with an interest in reliable operation of the North American bulk power system. Thus, the NERC Bylaws provide for fair stakeholder representation in the selection of NERC's trustees.

**Balanced decision-making in any NERC committee or subordinate organizational structure**

NERC's Bylaws authorize the Board of Trustees to create standing committees of NERC and such other committees as the Board deems necessary to carry out the purposes of NERC:

In addition to those committees specified by these Bylaws, to which the board shall appoint members in accordance with the requirements of these Bylaws, the

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<sup>82</sup> The chairman and vice-chairman of the MRC are selected annually by majority vote of the members of the MRC, and may not be from the same membership sector. Upon being selected as chairman and vice-chairman, these individuals cease to be representatives of the MRC sectors to which they were originally elected, and are thereafter responsible to act in the best interests of the members of NERC as a whole. NERC Bylaws Article VIII, §5.

<sup>83</sup> Article VIII, §4 of the Bylaws contains provisions for the election of additional Canadian members to the MRC as and when necessary to ensure that the percentage of Canadian members on the MRC is approximately equal to the percentage the net energy for load (NEL) of Canada is of the total NEL of the United States and Canada.

<sup>84</sup> NERC Bylaws Article VIII, §3.

board may by resolution create standing committees of the Corporation; and may in addition by resolution appoint such other committees as the board deems necessary to carry out the purposes of the Corporation. *The board shall appoint standing committees and other committees of the Corporation that are representative of members, other interested parties and the public, that provide for balanced decision making, and that include persons with outstanding technical knowledge and experience. All appointments of committees of the Corporation shall provide the opportunity for an equitable number of members from the United States and Canada (and from Mexico after the Corporation receives recognition by appropriate governmental authorities in Mexico as its electric reliability organization) to be appointed to each committee in approximate proportion to each country's percentage of the total NEL. All committees shall have such scope and duties, not inconsistent with law, as are specified in these Bylaws and the Rules of Procedure of the Corporation or otherwise determined by the board. (Emphasis added.)*<sup>85</sup>

Section 1300 of the NERC ROP provides additional criteria for the creation and appointment of NERC standing committees. In creating a standing committee, the NERC Board must approve the charter of the committee and assign specific authority to each committee necessary to conduct business within its charter.<sup>86</sup> Each committee shall have a defined membership composition that is explained in its charter. The specified committee membership composition can provide for balanced decision-making (i) by providing for representatives from each sector of the NERC membership, or (ii) where sector-based membership will not bring together the necessary diversity of opinions, technical knowledge and expertise in a particular subject area, by bringing together a wide diversity of opinions from industry experts with outstanding technical knowledge and experience in a particular subject area.<sup>87</sup> Committee membership shall also provide the opportunity for an equitable number of members from the United States and Canada, based approximately on proportionate NEL.<sup>88</sup>

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<sup>85</sup> NERC Bylaws Article VII, §1. “Committees specified by these Bylaws” include the nominating committee for the NERC board and the MRC (discussed above under “fair stakeholder representation in the selection of NERC’s trustees”), and the Personnel Certification Governance Committee (PGCC) provided for in Article XII of the Bylaws. The purpose of the PGCC is to provide oversight to the policies and processes used to implement and maintain the integrity and independence of the NERC System Operator Certification Program. NERC Bylaws Article XII, §1. The members of the PGCC are appointed by the Board from candidates nominated by a nominating task force; nominations and appointments are to take into account the need to include representatives of all geographic regions of North America on the PGCC. *Id.*, Article XII, §2. In addition to the aforementioned committees, NERC standing committees include the Standards Committee, Compliance and Certification Committee, Critical Infrastructure Protection Committee, and Operating and Planning Committees.

<sup>86</sup> NERC ROP §1301.

<sup>87</sup> NERC ROP §1302.

<sup>88</sup> NERC ROP §1302.

The NERC ROP require that committee members shall be selected in a manner that is open, inclusive, and fair.<sup>89</sup> Unless otherwise stated in the ROP or approved by the NERC board, all committee member appointments are to be approved by the board, and committee officers are to be appointed by the Chairman of the Board.<sup>90</sup>

Further, the NERC ROP require that all NERC committees and other subgroups (except for those organized on other than a sector basis because sector representation will not bring together the necessary diversity of opinions, technical knowledge, and experience in a particular subject area) must ensure that no two stakeholder sectors are able to control the vote on any matter, and no single sector is able to defeat a matter.<sup>91</sup> Any committees and subgroups organized on other than a membership-sector basis must be reported to the NERC board and the MRC, along with the reason for constituting the committee or subgroup in the manner chosen. The ROP provide that for any committee or subgroup organized on other than a membership-sector basis, a reasonable opportunity for additional participation (as members or observers) shall be provided for sectors not represented on the committee or subgroup (subject to any reasonable restrictions as may be necessary to accomplish the mission of the committee or subgroup).<sup>92</sup> Additionally, a reasonable opportunity must be provided for membership from sectors desiring to participate in any committees and subgroups pertaining to development of, interpretation of, or compliance with reliability standards.<sup>93</sup>

The NERC ROP provide that NERC standing committees may appoint subgroups using the same principles as specified in Section 1302 of the ROP (summarized in the immediately preceding paragraph).<sup>94</sup>

The provisions of Sections 1301 and 1302 of the NERC ROP regarding committee composition reflect revisions to these provisions that were approved or directed by the Commission in its October 30, 2006 Order on the *NERC ERO Governance Compliance Filing*.<sup>95</sup>

The requirement for balanced decision-making is also applicable to the reliability standards development process, and is discussed below under criterion 5, “The ERO has

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<sup>89</sup> NERC ROP §1303.

<sup>90</sup> NERC ROP §1303.

<sup>91</sup> NERC ROP §1302.

<sup>92</sup> NERC ROP §1302.

<sup>93</sup> NERC ROP §1302.

<sup>94</sup> NERC ROP §1305.

<sup>95</sup> See *North American Electric Reliability Corporation, Order on Petitions for Rehearing and Clarification; Order on Compliance Filing*, 117 FERC ¶61,126 (2006), at PP 75-87.

established rules that provide reasonable notice and opportunity for public comment, due process, openness and balance of interests in developing reliability standards, and otherwise exercising its duties.”

**3. The ERO has established rules that allocate equitably reasonable dues, fees and charges among end users for all statutory activities.**

NERC’s Bylaws require that the funding mechanism used to recover its net annual budget requirement (i.e., net of fees and other revenues received by NERC from users and purchasers of NERC products and services, and net of prior-period funding surplus or deficiency) “shall consist of such assessments as determined by the [NERC board] that result in an equitable allocation of the Corporation’s funding requirement among end users of the North American electric utility system as established in the Corporation’s Rules of Procedure.”<sup>96</sup> Section 1102 of the NERC ROP prescribes the allocation methods to be used to recover NERC’s funding requirements among regions of the United States and among countries in the North American bulk power system. Section 1102 specifies that NEL shall be used to allocate funding requirements among interconnections and Regional Entities except in those instances in which direct assignment of costs to a particular interconnection, Regional Entity, or group of entities is appropriate; however, in the case of direct assignment, NEL must be used to allocate the directly-assigned costs within the interconnection, Regional Entity, or group of entities:

**1101. NERC Funding and Cost Allocation**

1. In order that NERC’s costs shall be fairly allocated among interconnections and among regional entities, the NERC funding mechanism for all statutory functions shall be based on net energy for load (NEL).
2. NERC’s costs shall be allocated so that all load (or, in the case of costs for an interconnection or regional entity, all load within that interconnection or regional entity) bears an equitable share of such costs based on NEL.
3. Costs shall be equitably allocated between countries or regional entities thereof for which NERC has been designated or recognized as the electric reliability authority.
4. Costs incurred to accomplish the statutory functions for one interconnection, regional entity, or group of entities will be directly assigned to that

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<sup>96</sup> NERC Bylaws Article XIII, §3. NERC charges users/purchasers of some of its products and services directly for the products and services, at prices that cover some or all of the cost of providing the product or service. Examples include charges to purchasers of data sets from the Generating Availability Data System, charges to candidates for certification as NERC-certified operators for examinations and for renewal of credentials, and charges to continuing education providers for certification of their education programs.

interconnection, regional entity, or group of entities provided that such costs are allocated equitably to end-users based on net energy for load.<sup>97]</sup>

The NERC ROP define “Net Energy for Load” as:

[N]et generation of an electric system plus energy received from others less energy delivered to others through interchange. It includes system losses but excludes energy required for the storage of energy at energy storage facilities.<sup>98</sup>

In its Business Plan and Budget filings with the Commission for 2007, 2008, and 2009, NERC has, with one exception (discussed below) used NEL to allocate its net funding requirements among Regional Entities, between or among countries, and to the individual load-serving entities (LSE) or their designees or other entities (as applicable within the particular Regional Entity<sup>99</sup>). *See, e.g.*, the NERC 2009 Business Plan and Budget at 79 (Table 6) and Appendix C. The one exception is that NERC has negotiated memoranda of understanding (MOU) with the Ontario Energy Board and with La Régie de l’énergie du Québec pursuant to which certain NERC CMEP costs are not allocated to Ontario and Québec, in recognition of the level of NERC’s compliance monitoring and enforcement activities in those Canadian provinces. The excluded NERC costs are allocated to all remaining entities on the basis of NEL. NERC’s MOU with the Ontario Energy Board and resulting adjustment to the allocation of NERC CMEP costs to Ontario were accepted by the Commission in its Order on *NERC’s 2008 Business Plan and Budget*.<sup>100</sup> The additional adjustment to the allocation of NERC CMEP costs to Québec was first presented in NERC’s 2009 Business Plan and Budget filing. The adjustments to the allocations of CMEP costs to Ontario and Québec are based on and consistent with NERC’s “Expanded Policy on Allocation of Certain Compliance and Enforcement Costs,” which was submitted in *NERC’s 2009 Business Plan and Budget* filing and accepted by the Commission in an Order issued July 16, 2009.<sup>101</sup>

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<sup>97</sup> For example, NERC’s costs for the interchange distribution calculator, which is used only within the Eastern Interconnection, have been allocated only to the six Regional Entities within the Eastern Interconnection, on the basis of NEL.

<sup>98</sup> NERC ROP §202.

<sup>99</sup> For example, within NPCC, NERC allocates its funding requirement to the Balancing Authority for each of six Balancing Authority Areas within NPCC, and does not calculate assessments to individual LSEs.

<sup>100</sup> *North American Electric Reliability Corporation, Order Conditionally Accepting 2008 Business Plan and Budget of the North American Electric Reliability Corporation and Ordering Compliance Filings*, 121 FERC ¶ 61,057 (2007).

<sup>101</sup> *North American Electric Reliability Corporation, Order on Compliance Filing*, 128 FERC ¶ 61,025 (2009), at P 42.

**4. The ERO has established rules that provide fair and impartial procedures for enforcement of reliability standards through the imposition of penalties in accordance with 18 C.F.R. §39.7, including limitations on activities, operations, or other appropriate sanctions or penalties.**

NERC has established rules that provide fair and impartial procedures for monitoring and enforcement of compliance with reliability standards. These rules and procedures are embodied primarily in Section 400 of the NERC ROP, the NERC uniform CMEP (Appendix 4C to the ROP), and individual Regional Entity CMEPs (which conform generally to the uniform CMEP), all of which have been approved by the Commission. These rules and procedures were discussed in detail above under criterion 1, relating to the ERO's ability to develop and enforce reliability standards that provide for an adequate level of reliability of the bulk power system. As discussed above under criterion 1, Section 400 of the NERC ROP, and the NERC uniform CMEP, include provisions for avoidance of conflicts of interest on the part of the CEA personnel conducting compliance monitoring processes, provisions for notice to Registered Entities and opportunity to respond to compliance monitoring processes, and provisions allowing registered entities to engage in settlement discussions with the CEA concerning notices of alleged violations, proposed penalties or sanctions, and mitigation plans.

In addition, Attachment 2, Hearing Procedures, to the uniform CMEP contains detailed due process procedures for the conduct of hearings before the CEA hearing body, when requested by the registered entity, concerning a disputed notice of alleged violation and/or proposed penalty or sanction, disputed Mitigation Plan provisions, or disputed Remedial Action Directive. The Hearing Procedures, which have been approved by the Commission in two orders, subject to various specific compliance requirements,<sup>102</sup> are based on, and in most respects are quite similar to, the Commission's Rules of Practice and Procedure<sup>103</sup> and to the rules of practice and procedure used by many state public utility commissions.

The remainder of this discussion of NERC's compliance with criterion 4 addresses NERC's rules and procedures for the determination and imposition of penalties for violations of reliability standards.

Section 215(e)(6) of the FPA, and §39.7(g) of the Commission's regulations,<sup>104</sup> requires that any penalty imposed for violation of a reliability standard shall (A) bear a reasonable relation to the seriousness of the violation; and (B) take into consideration the efforts of the user, owner or operator to remedy the violation in a timely manner.<sup>105</sup> This fundamental requirement

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<sup>102</sup> *Order Addressing Revised Delegation Agreements*, 122 FERC ¶61,245 (2008); *Order Accepting Compliance Filings, Subject to Conditions*, 125 FERC ¶61,330 (2008).

<sup>103</sup> 18 C.F.R. Part 385.

<sup>104</sup> 18 C.F.R. §39.7(g).

<sup>105</sup> 18 C.F.R. §39.7(g)(1) also specifies that a penalty may be monetary or non-monetary, and may include, but is not limited to, a limitation on an activity, function, operation, or other

is embodied in Section 401.7 of the NERC ROP and in §3.8 of the NERC *Sanction Guidelines*, Appendix 4B to the ROP. Section 39.7(c) of the Commission's regulations<sup>106</sup> requires that NERC or a Regional Entity may, after notice and opportunity for hearing, impose a penalty on a user, owner or operator of the bulk power system for a violation of a reliability standard if NERC files a notice of penalty and record of the proceedings with the Commission and serves a copy on the user, owner or operator. The notice of penalty must contain (1) the name of the entity on whom the penalty is imposed, (2) identification of each reliability standard violated, (3) findings of fact with respect to any act or practice resulting in violation of the standard, (4) a description of the penalty imposed, (5) the record of the proceeding, (6) a form of notice suitable for publication, and (7) any other matters NERC or the Regional Entity may find relevant.<sup>107</sup> The penalty may not take effect earlier than the 31st day after NERC files the notice of penalty and record of proceeding with the Commission,<sup>108</sup> and is subject to review by the Commission on its own motion or on application of the user, owner or operator.<sup>109</sup> Section 5.6 of the uniform CMEP provides for the filing of a notice of penalty with the Commission, and for a 30-day period to run before the penalty becomes effective, in accordance with 18 C.F.R. §39.7(d)-(e).

Section 39.7(g) of the Commission's regulations<sup>110</sup> requires the ERO to submit for Commission approval penalty guidelines that set forth a range of penalties for violations of reliability standards, and specifies that a penalty imposed by the ERO or a Regional Entity must be within the range set forth in the penalty guidelines. The NERC *Sanction Guidelines* comprise the penalty guidelines established by NERC, which the Commission has approved pursuant to Section 39.7(g). The current version of the *Sanction Guidelines* became effective January 15, 2008, and was approved by the Commission in an Order issued October 18, 2007 (subject to compliance filing) and a letter order issued January 15, 2008, approving the compliance filing.<sup>111</sup>

The basic approach to determination of financial penalties set forth in the *Sanction Guidelines* is to determine the base penalty amount range for a violation of a reliability standard requirement, and then establish the specific penalty amount within the base penalty range based on aggravating or mitigating factors, if any, that may be present in the circumstances.

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appropriate sanction, including being added to a reliability watch list composed of major violators that is established by the ERO, a Regional Entity or the Commission.

<sup>106</sup> 18 C.F.R. §39.7(c).

<sup>107</sup> 18 C.F.R. §39.7(d).

<sup>108</sup> 18 C.F.R. §39.7(e).

<sup>109</sup> 18 C.F.R. §39.7(e).

<sup>110</sup> 18 C.F.R. §39.7(g)(2).

<sup>111</sup> The October 18, 2007 Order is *North American Electric Reliability Corporation.*, 121 FERC ¶61,033 (2007).



Additionally, the violator's ability to pay may be considered. Section 4 of the *Sanction Guidelines* sets forth a three-step process for the determination of monetary penalties:

Step 1: The Base Penalty Amount for the violation will be set.

Step 2: The Base Penalty Amount set in Step 1 will be reviewed, resulting in the Adjusted Penalty Amount.

Step 3: The Adjusted Penalty Amount determined in Step 2 may be reviewed and revised in light of the violator's financial ability to pay the penalty. Also, where applicable NERC or the Regional Entity will reconfirm that the penalty will disgorge unjust profits or economic benefits associated with an economic choice to violate by the violator.

Penalties are assessed on a per violation, per day basis unless NERC or the Regional Entity determines alternative frequency or duration is warranted. The *Sanction Guidelines* recognize that in the United States, the maximum penalty allowed pursuant to the FPA, on which the authority of NERC and the Regional Entities is based, is \$1,000,000 per day, per violation.<sup>112</sup>

The initial Base Penalty Amount range for a violation is determined using the Base Penalty Amount Table, Appendix A to the *Sanction Guidelines*, by finding the intersection of the Violation Risk Factor (VRF) of the requirement violated and the Violation Severity Level (VSL) assessed for the violation.<sup>113</sup> Each requirement in the NERC Reliability Standards has been assigned a VRF through the standards development process. The VRFs are assigned to reliability standard requirements to provide clear, concise, and comparative association between the violation of a requirement and the expected or potential impact of a violation of that requirement on the reliability of the bulk power system. One of three defined levels of risk (VRF) is assigned to each reliability standard requirement: Lower Risk Factor, Medium Risk Factor, or High Risk Factor.<sup>114</sup> The VSLs are defined measurements of the degree to which a registered entity violated a requirement of a standard. The VSL is assessed post-violation and is an indicator of how severely the registered entity actually violated the requirement or requirements in question. Up to four levels of VSL can be defined for each reliability standard requirement: Lower, Moderate, High, and Severe.<sup>115</sup>

NERC or the Regional Entity may set the initial Base Penalty Amount for the violation at the highest value in the Base Penalty Amount range as determined from the Base Penalty Amount Table.<sup>116</sup> However, NERC or the Regional Entity may set the Base Penalty Amount at a

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<sup>112</sup> *Sanction Guidelines* §3.20.

<sup>113</sup> *Sanction Guidelines* §4.1.

<sup>114</sup> *Sanction Guidelines* §4.1.1.

<sup>115</sup> *Sanction Guidelines* §4.1.2.

<sup>116</sup> *Sanction Guidelines* §4.2.

lower value in the initial Base Penalty Amount range based on two specific circumstances regarding the violation and the violator, specifically: (a) the applicability of the VRF for the violation to the specific circumstances of the violator (including, but not limited to, the violator's aggregate and net load, and interconnection characteristics such as voltage class and transfer ratings); and (b) whether the violation is an inconsequential first violation by the registered entity of the particular reliability standard(s).<sup>117</sup> NERC or the Regional Entity may consider the specific circumstances of the registered entity to determine if the violation of the requirement in question actually produced the degree of risk or harm to the bulk power system anticipated by the VRF assigned to the requirement; if that degree of risk or harm was not or would not have been produced, the Base Penalty Amount may be set to a lower amount within the initial range determined from the Base Penalty Amount Table.<sup>118</sup> Further, if the actual or foreseen impact of the violation is judged to be inconsequential and the violation is the registered entity's first violation of the requirement, NERC or the Regional Entity may set the Base Penalty Amount at a lower value within the initial Base Penalty Amount range determined from the Base Penalty Amount Table, or excuse the penalty for the violation. However, such reduction or elimination of the penalty generally will not be applied if the violator has a poor compliance record.<sup>119</sup>

In setting the Base Penalty Amount, NERC and the Regional Entity will also consider the time horizon involved in the violation.<sup>120</sup> Reliability standards involving longer and broader time horizons, such as long-term planning activities, may have lesser immediate impact and pose less immediate risk to reliability of the bulk power system than standards addressing shorter and narrower time frames, such as the Registered Entity's conduct in real time. Similarly, standards involving longer and broader time horizons typically will provide a longer time period over which to discover and remedy a violation as compared to standards involving more immediate activities such as next-day planning or same-day or real-time operations. Therefore, violations of standards involving more immediate or real-time activities will generally incur larger penalties than violations of standards with longer or broader time horizons. The time horizon considered and its impact on the Base Penalty Amount for the violation will be determined by NERC or the Regional Entity based on judgment and the facts of the violation. The rationale for, and impact of, the time horizon used will be documented in the Notice of Penalty.<sup>121</sup>

The Base Penalty Amount, determined as described above, may be adjusted upward or downward based on the application of adjustment factors, to reflect specific facts and

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<sup>117</sup> *Sanction Guidelines* §4.2.

<sup>118</sup> *Sanction Guidelines* §4.2.1.

<sup>119</sup> *Sanction Guidelines* §4.2.2.

<sup>120</sup> *Sanction Guidelines* §4.2.

<sup>121</sup> *Sanction Guidelines* §3.12.

circumstances material to each violation and violator. At a minimum, NERC or the Regional Entity will consider the possible adjustment factors listed below.<sup>122</sup>

- a. Repetitive violations and the violator's (negative) compliance history.<sup>123</sup>
- b. Failure of the violator to comply with compliance directives.<sup>124</sup>
- c. Self-disclosure and voluntary corrective action by the violator.<sup>125</sup>
- d. Degree and quality of cooperation by the violator in the violation investigation and in any remedial action directed for the violator.<sup>126</sup>
- e. The presence (or absence) and quality of the violator's compliance program.<sup>127</sup>
- f. Any attempt by the violator to conceal the violation or information needed to investigate the violation.<sup>128</sup>
- g. Intentional violation, *i.e.*, the violator violated the standard for a purpose other than a demonstrably good faith effort to avoid a significant, greater threat to the immediate reliability of the bulk power system, including an economic choice to violate the standard.<sup>129</sup>

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<sup>122</sup> *Sanction Guidelines* §4.3. A number of these adjustment factors are identified in the Commission's *Policy Statement on Enforcement* issued October 20, 2005 under Docket No. PL06-00.

<sup>123</sup> *Sanction Guidelines* §4.3.1. A violation history of no violations will not produce any mitigation of the penalty otherwise determined.

<sup>124</sup> *Sanction Guidelines* §4.3.2.

<sup>125</sup> *Sanction Guidelines* §4.3.3.

<sup>126</sup> *Sanction Guidelines* §4.3.4.

<sup>127</sup> *Sanction Guidelines* §4.3.5.

<sup>128</sup> *Sanction Guidelines* §4.3.6. Doubling of the penalty for the first incident of concealment by the violator, and an even larger increase for subsequent incidents of concealment, are suggested by the *Sanctions Guidelines*.

<sup>129</sup> *Sanction Guidelines* §4.3.7. Doubling of the penalty for the first intentional violation by the violator, and an even larger increase for subsequent intentional violations, are suggested by the *Sanctions Guidelines*. In addition, any penalty issued for a violation that resulted from an economic choice to violate should at a minimum disgorge any profits or economic benefits acquired as a consequence of this behavior. *Id.*

h. Extenuating circumstances.<sup>130</sup>

NERC or the Regional Entity may also consider additional factors it deems appropriate under the circumstances so long as their use and effect are clearly identified and adequately justified.<sup>131</sup>

In setting the Final Penalty Amount, NERC or the Regional Entity may, at the written request of the violator, review the Adjusted Penalty Amount, based on relevant, verifiable information on the violator's ability to pay. (This step is the primary vehicle for addressing the ability to pay of "not for profit" and other similar organizations.) As a result of this review, NERC or the Regional Entity may reduce the penalty payable to an amount that the violator is deemed to have the ability to pay, excuse the penalty amount payable, or sustain the Adjusted Penalty Amount. If the penalty amount is reduced or excused, NERC or the Regional Entity will consider the assessment of an appropriate non-monetary sanction(s) as a substitute or alternative for the penalty amount that has been excused or by which it has been reduced.<sup>132</sup>

Finally, notwithstanding the application of any other consideration or factor in determining the final penalty amount, if the violation involved an economic choice to violate the standards, NERC or the Regional Entity will reconfirm that the penalty amount set results in disgorgement of any profit or other economic benefit obtained by the violator from the violation, to the extent ascertainable.<sup>133</sup>

Under the *Sanction Guidelines*, NERC or the Regional Entity may impose non-monetary sanctions for violations of reliability standards. Non-monetary sanctions must be applied with the objective of promoting reliability and compliance with the reliability standards. Consistent with 18 C.F.R. §39.7(g)(1), non-monetary standards may include, but are not limited to (i) limitations on the violator's activities, functions, or operations, or (ii) placing the violator on a reliability watch list of major violators.<sup>134</sup>

In instances of multiple violations of standards by a Registered Entity related to a single act or common incidence of noncompliance, NERC or the Regional Entity will generally determine and issue a single aggregate penalty or sanction (or remedial action directive) bearing a reasonable relationship to the aggregate of the related violations. The penalty or sanction (or remedial action directive) will generally be at least as large or expansive as what would be called for individually for the most serious of the violations.<sup>135</sup>

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<sup>130</sup> *Sanction Guidelines* §4.3.8.

<sup>131</sup> *Sanction Guidelines* §4.3.

<sup>132</sup> *Sanction Guidelines* §4.4.1.

<sup>133</sup> *Sanction Guidelines* §4.4.2.

<sup>134</sup> NERC uniform CMEP §5.

<sup>135</sup> *Sanction Guidelines* §3.10.

Where a penalty or sanction has been determined by a Regional Entity and accepted by the registered entity (including following a hearing before the Regional Entity hearing body where the registered entity does not appeal the hearing body decision), prior to filing a Notice of Penalty with the Commission, NERC will review the penalty or sanction for consistency with the *Sanction Guidelines* and consistency with penalty determinations in other Regions for the same or similar violations in the same or similar circumstances. NERC may direct the Regional Entity to revise a penalty determination that clearly conflicts with the goal of consistent national reliability enforcement, in which case the registered entity may reopen the proceedings on any issue, irrespective of whether the issue was previously litigated, settled or unopposed.<sup>136</sup>

**5. The ERO has established rules that provide reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing reliability standards, and otherwise exercising its duties.**

NERC has established rules that provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing reliability standards, and otherwise exercising its duties. With respect to the development of reliability standards, NERC's Bylaws require that:

The Corporation shall develop reliability standards pursuant to procedures and processes that shall be specified in the Rules of Procedure of the Corporation. The Rules of Procedure shall provide for the development of reliability standards through an open, transparent, and public process that provides for reasonable notice and opportunity for public comment, due process, and balancing of interests and is designed to result in reliability standards that are technically sound. Participation in the process for developing reliability standards shall not be limited to members of the Corporation but rather shall be open to all persons and entities with an interest in the reliable operation of the bulk power system.<sup>137</sup>

NERC's process for developing and modifying reliability standards, which the Commission accepted as meeting the criteria for certifying NERC as the ERO pursuant to §215 of the FPA and §39.3(b) of the Commission's regulations,<sup>138</sup> is embodied in Section 300 of the NERC ROP and the NERC RSDP, Appendix 3A to the NERC ROP. Section 304 of the NERC ROP states that NERC shall develop reliability standards in accordance with the NERC RSDP, Appendix 3A to the ROP. The RSDP sets forth the detailed process steps for development and approval of a new reliability standards or revision to a reliability standard.

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<sup>136</sup> *Sanction Guidelines* §5.6

<sup>137</sup> NERC Bylaws Article IX, §2.

<sup>138</sup> *ERO Certification Order*, 116 FERC ¶61,062, at PP 239, 241, 250.

Section 304 of the NERC ROP sets forth NERC’s “Essential Principles for the Development of Reliability Standards,” which include openness, transparency, consensus building, fair balance of interests, due process, and timeliness:

1. **Openness** — Participation shall be open to all persons who are directly and materially affected by the reliability of the North American bulk power system. There shall be no undue financial barriers to participation. Participation shall not be conditional upon membership in NERC or any other organization, and shall not be unreasonably restricted on the basis of technical qualifications or other such requirements.
2. **Transparency** — The process shall be transparent to the public.
3. **Consensus-building** — The process shall build and document consensus for each standard, both with regard to the need and justification for the standard and the content of the standard.
4. **Fair Balance of Interests** — The process shall fairly balance interests of all stakeholders and shall not be dominated by a single interest category.
5. **Due Process** — Development of standards shall provide reasonable notice and opportunity for any person with a direct and material interest to express views on a proposed standard and the basis for those views, and to have that position considered in the development of the standards.
6. **Timeliness** — Development of standards shall be timely and responsive to new and changing priorities for reliability of the bulk power system.

Section 305 of the NERC ROP specifies that “NERC reliability standards shall be approved by a registered ballot body prior to submittal to the [NERC] board and then to the ERO governmental authorities for their approval . . .”, and that “Any person or entity may join the registered ballot body to vote on standards.” The RBB is organized on an industry segment basis, and persons or organizations joining the RBB must select membership in the appropriate segment (subject to periodic review by NERC).<sup>139</sup> The RBB segments and the criteria for membership in each segment are set forth in the RSDP.<sup>140</sup>

Segment 1: Transmission Owners

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<sup>139</sup> NERC ROP §305.

<sup>140</sup> NERC RSDP at 40-41. The segments of the RBB are different from the NERC membership segments established by Article II, §4 of the NERC Bylaws (discussed above under criterion 2). The Commission approved the use of segments for the RBB that are different from the NERC membership segments. *North American Electric Reliability Corporation, Order on Petitions for Rehearing and Clarification, Order on Compliance Filing*, 117 FERC ¶61,126 (2006), at P 30.

- Segment 2: Regional Transmission Organizations and Independent System Operators
- Segment 3: Load-Serving Entities
- Segment 4: Transmission Dependent Utilities
- Segment 5: Electric Generators
- Segment 6: Electricity Brokers, Aggregators, and Marketers
- Segment 7: Large Electricity End Users
- Segment 8: Small Electricity Users
- Segment 9: Federal, State, and Provincial Regulatory or other Government Entities
- Segment 10: Regional Reliability Organizations and Regional Entities

Section 306 of the ROP provides for the standards development process to be overseen by a Standards Committee, which is an elected body comprised of two members of each segment of the RBB.<sup>141</sup> The Standards Committee is to ensure stakeholder interests are fairly represented in the reliability standards development process. Section 308.2 of the NERC ROP specifies that proposed reliability standards or revisions to reliability standards shall be submitted to the NERC Board of Trustees for approval after being approved by the RBB pool voting on the standard.

The NERC RSDP sets out the detailed steps in the process for developing and approving reliability standards or revisions to standards. The process is based on the procedures of the ANSI and other standards-setting organizations in the United States and Canada.<sup>142</sup> The standards development process is intended to develop consensus on both the need for and content of a proposed standard.<sup>143</sup> As detailed in the RSDP, the process includes the following key elements:

**Nomination of a proposed standard, revision to a standard, or withdrawal of a standard**, using a Standard Authorization Request (SAR), which may entail appointing a SAR drafting team.<sup>144</sup>

**Public posting of the SAR** to allow interested persons and entities to review and comment on the need for the proposed standard and the expected outcomes and impacts from implementing it, and to identify if there is stakeholder consensus on the need, scope and applicability of the standard proposed by the SAR.<sup>145</sup>

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<sup>141</sup> Election of the members of the Standards Committee is governed by the *Election Procedure for Members of NERC Standards Committee*, Appendix 3B to the NERC ROP.

<sup>142</sup> NERC RSDP at 14. ANSI accredited NERC's reliability standards development process in 2003.

<sup>143</sup> NERC RSDP at 14.

<sup>144</sup> NERC RSDP at 14 and 15-16.

<sup>145</sup> NERC RSDP at 14 and 16.

**Review of the public comments** in response to the SAR and prioritization of proposed standards, leading to **authorization to develop standards** for which there is a stakeholder consensus-based need.<sup>146</sup>

**Appointment of a Standard Drafting Team** to draft the new or revised standard. The appointed Standard Drafting Team is to have the expertise, competencies and diversity of views needed to develop the standard. The appointment process includes a public solicitation for nominees.<sup>147</sup>

**Drafting the new or revised standard.** The standard will be drafted by the Standard Drafting Team with the assistance and administrative support of the NERC Standards Process Manager (a NERC professional staff member), who will review the draft standard for consistency of quality and completeness and to ensure the standard is within the scope and purpose identified in the SAR.<sup>148</sup>

**Public posting of the draft standard** to allow interested parties to review and comment on it, to receive specific comments from interested parties on the text of the standard, to assess stakeholder consensus on the draft standard, and to determine if the draft standard should be modified to increase consensus.<sup>149</sup>

**Field testing** (if any) of the draft standard and its measures.<sup>150</sup>

**Analysis of public comments and field test results** by the Standard Drafting Team, giving consideration to the written views and objections of all participants, to determine if there is consensus the proposed standard should go to ballot, or requires further work.<sup>151</sup>

**Balloting of the standard** by the industry stakeholder ballot pool formed from the RBB for purposes of balloting the new or revised standard.<sup>152</sup> (The voting process is described below.)

**Re-balloting of the standard to consider specific comments** by those submitting negative votes with comments.<sup>153</sup>

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<sup>146</sup> NERC RSDP at 14 and 17.

<sup>147</sup> NERC RSDP at 14 and 17-18.

<sup>148</sup> NERC RSDP at 14 and 18-19.

<sup>149</sup> NERC RSDP at 14 and 19-20.

<sup>150</sup> NERC RSDP at 14 and 20.

<sup>151</sup> NERC RSDP at 20-21.

<sup>152</sup> NERC RSDP at 14 and 21-22.

<sup>153</sup> NERC RSDP at 14, 23-24. Voters on the first ballot are allowed to submit comments with affirmative ballots and reasons for their votes with negative ballots (although inclusion of a



**Vote by the NERC Board to approve or reject the standard that has been approved by the ballot pool.** The Board may adopt or reject a reliability standard that has been approved by the ballot pool, but may not modify the standard; however, if the Board chooses not to adopt a proposed standard, the Board shall provide its reasons.<sup>154</sup>

**Submission of the RBB- and Board-approved reliability standard to the Commission** and other applicable governmental authorities for approval.<sup>155</sup>

As provided in the RSDP, voting on a proposed reliability standard or revision to a standard is done by the RBB ballot pool formed for that standard, and is tallied on a weighted segment basis. At least 30 days prior to the start of a ballot, the NERC Standards Process Manager issues a notice to the entities in the RBB advising them of the upcoming ballot on the new or revised standard, so that entities may elect to join the ballot pool for balloting the standard. Any member of the RBB may join (or leave) the ballot pool for the standard until the ballot period begins.<sup>156</sup> The balloting is conducted electronically with voting allowed during a specified ballot period, typically 10 days.<sup>157</sup> Approval of a proposed standard or revision to a standard requires both (i) a quorum, which is established by at least 75 percent of the members of the ballot pool submitting a response with an affirmative vote, a negative vote, or an abstention,<sup>158</sup> and (ii) affirmative votes by a two-thirds majority of the weighted segment votes.<sup>159</sup> The calculation of the weighted segment voting results is described in detail in the RSDP.<sup>160</sup>

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statement of reasons with a negative ballot is not required). If one or more negative ballots are submitted with statements of reasons, a second ballot must be conducted. *Id.* at 23.

<sup>154</sup> NERC RSDP at 14 and 24.

<sup>155</sup> NERC RSDP at 24.

<sup>156</sup> NERC RSDP at 21-22.

<sup>157</sup> NERC RSDP at 22.

<sup>158</sup> NERC RSDP at 22. If a quorum of the ballot pool is not established, the standard is balloted a second time, allowing a 15-day period for the ballot. If a quorum is not established on the second ballot, the Standards Process Manager will re-survey the RBB to establish interest in participating in a ballot on the standard, and then a re-ballot will occur with the resulting revised ballot pool. *Id.*

<sup>159</sup> NERC RSDP at 22. For this purpose the number of votes cast is the sum of the affirmative and negative votes cast by the ballot pool, excluding abstentions and non-responses.

<sup>160</sup> NERC RSDP at 21-22 and 42-43 (Appendix C — Examples of Weighted Segment Voting Calculation).

The foregoing demonstrates that NERC's rules provide reasonable notice and opportunity for public comment, due process, openness, and balance of interests in the development of reliability standards. In finding that NERC met the statutory and regulatory criteria to be certified as the ERO, the Commission found NERC's reliability standards development process met the ERO certification requirement that the ERO candidate have rules providing for reasonable notice and opportunity for public comment, due process, openness, and balancing of interests in developing reliability standards.<sup>161</sup>

Other NERC rules provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in the exercise of NERC's duties other than developing reliability standards. As discussed under criterion 2 above, NERC's Bylaws provide for its trustees to be elected by the MRC, which (again per the NERC Bylaws) is comprised of representatives of the segments of the NERC membership as defined in the Bylaws. The Bylaws also provides that amendments to the Bylaws must be adopted by majority vote of both the Board of Trustees and the MRC, conducted after at least 10 days and no more than 60 days notice of the vote on the proposed amendment. Additionally, the NERC membership may adopt new Bylaws, or alter, amend, or repeal amendments adopted by vote of the board and the MRC, by vote of two-thirds of the sectors voting on the alteration, amendment, repeal or adoption.<sup>162</sup>

The Bylaws further provide that revisions to the NERC ROP may be proposed by (i) any 50 members of NERC, which must include members from at least three membership segments, (ii) the MRC, (iii) a standing committee of NERC to whose function and purpose the ROP to be amended pertains, or (iv) an officer of NERC. A proposed revision to the NERC ROP must be posted on the NERC website for public comment for a minimum of 45 days prior to the board vote on the proposed revision.<sup>163</sup>

The NERC Bylaws require that notice of meetings of the NERC board and of the MRC, and notice of calls for action without a meeting by the board or the MRC, along with all nonconfidential materials to be considered by the board or MRC at a meeting or in an action without a meeting, shall be posted on the NERC website at least 24 hours prior to the meeting or within 24 hours after the call for action without a meeting.<sup>164</sup> The ROP provide that notice of meetings of NERC committees, and all nonconfidential materials relating to the meeting, shall be posted on the NERC website at approximately the same time(s) the notice and materials are provided to the committee members.<sup>165</sup> Additionally, the Bylaws require that, except for discussions of certain specified non-public topics, meetings of the board and of the MRC shall be

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<sup>161</sup> *ERO Certification Order* at P 250.

<sup>162</sup> NERC Bylaws Article XIV, §1.

<sup>163</sup> NERC Bylaws Article XI, §2.

<sup>164</sup> NERC Bylaws Article V, §§4 and 6; Article VIII, §§10 and 12.

<sup>165</sup> NERC ROP §1304.1.

open to the public (subject to reasonable space limitations).<sup>166</sup> Similarly, the NERC ROP require that, except for discussions of certain specified non-public topics, meetings of NERC standing committees shall be open to the public (subject to reasonable space limitations).<sup>167</sup>

With respect to the preparation of NERC's annual business plan and budget, the NERC Bylaws provide that NERC shall post a draft business plan and budget for comment by the NERC membership, the MRC, and the NERC standing committees for at least 30 days prior to the board meeting at which the annual business plan, budget and funding requirement is to be approved for submission to the Commission. The board shall also consult with the members of the MRC on the proposed business plan and budget before it is adopted.<sup>168</sup> Should a supplemental or modified budget or assessment be considered for adoption during the course of the year, the Bylaws require that the procedures for posting, receipt of comments, and consultation with the MRC shall be followed to the extent possible in the board's judgment in light of the exigency of the circumstances necessitating preparation and approval of the supplemental or modified budget, funding and assessment.<sup>169</sup>

With respect to compliance monitoring and enforcement, as discussed above under criteria 1 and 4, the NERC uniform CMEP and Regional Entity CMEPs, the NERC Hearing Procedures (Attachment 2 to the uniform CMEP), and the NERC *Sanction Guidelines*, provide for reasonable notice to and due process for users, owners, and operators of the bulk power system in the conduct of NERC's and the Regional Entities' compliance monitoring and enforcement activities, including the implementation of the compliance monitoring processes, the conduct of hearings on disputed notices of alleged violations, proposed penalties, disputed Mitigation Plan components and disputed Remedial Action Directives, and the imposition of penalties and sanctions for violations of reliability standards.

Finally, as discussed above under criterion 2, the NERC Bylaws and ROP require members to be selected for NERC standing committees and other committees and subgroups so as to (subject to specified exceptions) provide for balanced decision making, such that no two stakeholder sectors can control the voting on the committee and no single stakeholder sector is able to defeat a matter; and to provide the opportunity for an equitable number of members from the United States and Canada.

**6. The ERO has established rules that provide appropriate steps to gain recognition in Canada and Mexico.**

As stated in its Certificate of Incorporation, one of the corporate purposes of NERC is

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<sup>166</sup> NERC Bylaws Article V, §4; Article VIII, §10.

<sup>167</sup> NERC ROP §1304.1.

<sup>168</sup> NERC Bylaws Article XIII, §4; *see also* NERC ROP §1103.1.

<sup>169</sup> NERC Bylaws Article XIII, §5. To date, as the ERO, NERC has not requested a supplemental or modified budget requiring increased funding and assessments from LSEs.

“to act as the electric reliability organization for the United States as certified by the Federal Energy Regulatory Commission and for Canada and Mexico as recognized by applicable government and regulatory authorities in such countries, all pursuant to law.”

**a. Canada.** Under the Canadian Constitution, regulation of electricity is primarily within the jurisdiction of each province. Canada does not have a “FERC-equivalent” with plenary jurisdiction over electricity matters, although the National Energy Board (NEB) does have jurisdiction over international power lines (IPLs). Accordingly, beginning before its certification as the ERO for the United States and continuing to the present time, NERC has devoted significant efforts to developing relationships with, and where possible attempting to obtain recognition as the electric reliability organization within, each of the relevant provincial authorities, as well as the NEB, as described below.

**Alberta:** On December 28, 2007, the Alberta Minister of Energy issued an order recognizing NERC as the ERO for purposes of the *Electric Utilities Act* and the *Transmission Regulation* of Alberta.<sup>170</sup> The accompanying letter directed the Alberta Electric System Operator (AESO) and Alberta Utilities Commission (AUC) to work cooperatively with NERC and the Regional Entities to implement mandatory reliability standards in Alberta. The amendment to the *Transmission Regulation* establishes a mechanism for reliability standards to become mandatory. That mechanism is for the AESO to submit standards to the AUC for approval. The expectation is that the reliability standards in force will be the NERC standards, to the extent the AESO adopts them, recommends them to the AUC for approval, and the AUC approves them. The AESO may also adopt and recommend for AUC approval other reliability standards to take the place of one or more NERC standards. Under that mechanism, the AUC has approved three NERC Reliability Standards, and is considering additional standards recommended for approval by the AESO. Under an agreement between WECC and AESO, WECC will monitor AESO for compliance with reliability standards. The AESO will monitor the remaining entities in Alberta for compliance with reliability standards. Potential violations of reliability standards are referred by both WECC and the AESO to the Alberta Market Surveillance Administrator for prosecution. The AUC holds the authority to sanction or impose penalties.

**British Columbia:** A mechanism is in place for standards to become mandatory, but none are yet mandatory. The British Columbia Utilities Commission (BCUC) would set and enforce mandatory reliability standards. The expectation is that British Columbia Transmission Corporation (BCTC) will file standards for approval with the BCUC. The BCTC is a signatory to the WECC Reliability Management System agreement.

**Manitoba:** In April 2009, legislation was introduced that would give Manitoba the authority to make reliability standards developed by NERC mandatory and enforceable in the Province; this legislation was adopted in June 2009.<sup>171</sup> As an interim measure, in May 2008 NERC, MRO, and Manitoba Hydro signed an agreement by which reliability standards are

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<sup>170</sup> Government of Alberta Department of Energy Ministerial Order 79/2007 (Dec. 28, 2007).

<sup>171</sup> Manitoba Hydro Amendment and Public Utilities Board Amendment Act, assented to June 11, 2009.

binding and enforceable on Manitoba Hydro until such time as broader legislative authority is adopted. The Manitoba government has designated the Manitoba Public Utilities Board to hear any disputed matters regarding compliance with reliability standards by Manitoba Hydro.

**New Brunswick:** NERC Reliability Standards are mandatory in New Brunswick by operation of law as a part of the New Brunswick market rules. On October 3, 2008, NERC, the Minister of Energy of the Province of New Brunswick, and the New Brunswick System Operator (NBSO) signed a MOU that recognizes NERC's role as the ERO and finds that NERC is a "standards authority" within the meaning of the New Brunswick *Electricity Act*. NERC, NPCC, and NBSO have signed a MOU under which NERC and NPCC would monitor compliance and carry out enforcement as to the NBSO. The NBSO would monitor and enforce compliance with reliability standards by those entities within New Brunswick as a part of its market rules.

**Nova Scotia:** The Nova Scotia Utilities and Review Board (NSUARB) has legislative authority to adopt and enforce mandatory reliability standards. No standards are yet in force. The NSUARB retains the authority to make findings of violation and impose sanctions within Nova Scotia. NERC and NPCC could make recommendations to the NSUARB regarding compliance matters. NERC and the NSUARB have signed an MOU regarding their respective roles. NERC, NPCC, Nova Scotia Power, and the NSUARB are negotiating a further MOU to implement the first MOU. Nova Scotia Power is currently reviewing NERC standards and will be formally proposing them for adoption by the NSUARB during 2009.

**Ontario:** The Ontario Minister of Energy has recognized NERC as the ERO within Ontario. NERC Reliability Standards are mandatory in Ontario by operation of law as a part of the market rules of the Ontario Independent Electric System Operator (Ontario IESO.) Under recent changes to Ontario law, proposed reliability standards are formally noticed to the Ontario Energy Board (OEB) by the Ontario IESO. The standards become legally enforceable, unless within a prescribed time, the OEB takes action to the contrary. The OEB now also has the power to remand reliability standards. Pursuant to an MOU between NERC and the OEB and an MOU between NERC, NPCC, and the Ontario IESO, NERC and NPCC monitor compliance and carry out enforcement as to the Ontario IESO. The Market Surveillance unit of the Ontario IESO monitors and enforces compliance with reliability standards by those entities within Ontario as a part of its market rules. Modifications to the two MOUs are under consideration to reflect the change in Ontario law that gives the OEB remand authority.

**Québec:** La Québec Régie de l'énergie has statutory authority to set and enforce reliability standards. Standards are to be proposed by the Québec reliability coordinator to the Régie for adoption. Standards are not yet in force in Québec. NERC and the Régie have signed a MOU describing their respective roles in reliability. NERC, NPCC, and the Régie have negotiated a services agreement under which NERC and NPCC would provide compliance and enforcement monitoring services to the Régie. The Régie has the authority to make the decision on enforcement matters and impose penalties. NERC and NPCC would make recommendations to the Régie on compliance and enforcement matters as well as provide reports and advice on other matters related to reliability. The agreement will be done in two phases. NERC, NPCC, and the Régie signed the Phase I agreement on May 8, 2009. Phase II is being posted for comment within Québec, with signing expected in the third or fourth quarter of 2009. On a

parallel path, TransÉnergie, the entity designated by the Régie as “reliability coordinator” within Québec, will be proposing reliability standards for adoption by the Régie on a similar time schedule.

**Saskatchewan:** The Province of Saskatchewan does not have a separate regulatory authority. Under provincial law, Saskatchewan Power Corporation (SPC) has the authority to set, monitor, and enforce reliability standards within Saskatchewan. NERC, MRO, and SPC have negotiated and signed a MOU, effective February 3, 2009, covering the respective roles of the parties regarding reliability and monitoring compliance with reliability standards. SPC has established a “Saskatchewan Authority” within SPC to serve as the oversight function for reliability within the province. The MOU recognizes NERC and MRO as Electric Reliability Standards Setting Bodies for Saskatchewan. The Saskatchewan Authority may, on recommendation of NERC and MRO, make a finding of non-compliance and may order a mitigation plan. This approach is viewed as an interim step pending possible future changes in legislation.

**National Energy Board:** The NEB has jurisdiction only with respect to IPLs. The NEB has announced an intention to require owners of IPLs to follow NERC Reliability Standards and is considering the steps necessary to achieve that goal. NERC and the NEB have signed a MOU describing their respective roles in reliability. Until such time as reliability standards are made mandatory with respect to IPLs, NERC, working with NPCC, MRO, and WECC, has implemented a procedure to report system events and potential compliance matters involving IPLs to the NEB.

**b. Mexico.** No legislative authority currently exists in Mexico for a regulatory authority to recognize NERC as the “electric reliability organization” or exercise regulatory authority over reliability matters. NERC shares significant developments with representatives of the Comisión Reguladora de Energía (CRE), and the CRE participates in the quarterly Trilateral meetings among regulators on reliability matters. The Comisión Federal de Electricidad (CFE) has responsibility for the reliable operation of the electric system in Mexico, and CFE is a signatory to the WECC Reliability Management System with respect to the portion of the grid in Baja California Norte that is part of the Western Interconnection.

## II. NERC PROGRAM AREA STATEMENTS OF ACTIVITIES AND ACHIEVEMENTS

Each NERC statutory direct program area, plus Members' Forums, prepared a description of its activities and achievements since NERC was certified as the ERO in 2006. These descriptions are based on a set of purposes and objectives for each program area. In this section, for each NERC program area, its purposes and objectives are stated followed by a description of the program's activities and achievements with respect to each purpose and objective.

### A. Reliability Standards Development Program

1. **NERC shall develop and maintain reliability standards applicable to bulk power system owners, operators, and users that enable NERC and Regional Entities:**
  - a. **to measure the reliability performance of bulk power system owners, operators and users; and**
  - b. **to hold bulk power system owners, operators and users accountable for reliable operation of the bulk power system.**

NERC has developed reliability standards during the certification period using the ANSI-accredited development process originally established in 2003. These process requirements are embodied in the NERC RSDP that governs the development process. In April 2005, the former planning standards and operating policies were transformed into what was termed the Version 0 Reliability Standards, and have served as the general template that is utilized for the current set of reliability standards. NERC submitted a total of 107 reliability standards to the Commission between April 2006, when NERC applied to be the ERO, and November 2006, the latest date on which the Commission acted on proposed Reliability Standards in its March 2007, Order No. 693. In Order No. 693, the Commission approved 83 of these standards and held 24 pending further information. Subsequent to this action, the Commission approved 12 additional reliability standards, CIP-002-1 through CIP-009-1, FAC-010-2, FAC-011-2, and FAC-014-2, and NUC-001-1. In the United States, there are 94 Commission-approved continent-wide Reliability Standards now in effect with one more to be effective April 1, 2010.<sup>172</sup> In addition, the Commission has also approved nine WECC reliability standards, which are all in effect as of July 1, 2009.

Since NERC was certified as the ERO in July, 2006, the Reliability Standards Development Program, utilizing the RSDP and working with volunteer industry stakeholder-comprised drafting teams, developed and approved the following NERC continent-wide Reliability Standards that permit NERC and the Regional Entities to measure the reliability performance of and hold owners, operators, and users accountable for, the reliable operation of the bulk power system:

- 50 revised standards with new or revised requirements;

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<sup>172</sup> The effective date for Standard NUC-001-1 is April 1, 2010.

- 20 versions that added additional compliance measures to then-existing reliability standards;
- 13 formal interpretations to requirements in NERC Reliability Standards; and
- 21 versions that correct various errata changes.

In addition, in February and March, 2007, NERC filed with the Commission an entire body of Violation Risk Factors for the then-existing set of NERC Reliability Standards. In similar fashion, NERC filed an entire set of Violation Severity Levels for the 83 Commission-approved Reliability Standards and proposed NUC-001-1 – Nuclear Plant Interface Coordination Reliability Standard.

Since ERO certification, NERC Standards Program staff has evaluated 22 proposed Regional Entity reliability standards or revisions to Regional Entity standards. To date, nine original standards and seven updated versions to the original nine have been approved by the NERC board, with an additional Regional standard expected to be presented to the NERC board for approval in August 2009. The remaining five are being reviewed by the Regional Entities following NERC's evaluation.

**2. NERC shall develop reliability standards that have the following attributes:**

- a. Technically excellent (statement of applicability; clear statement of purpose describing how the standard contributes to the reliability of the bulk power system; statement of performance requirement or outcome that will provide for a reliable bulk power system consistent with good utility practices and the public interest; performance requirements to evaluate compliance that are objectively measurable by third parties with relevant knowledge or expertise; sound technical basis in engineering and operations; complete and self-contained; consequences for noncompliance are clearly presented; clear and unambiguous language; requirements can be practically implemented; consistent terminology is used);**
- b. Timely;**
- c. Just, reasonable, not unduly discriminatory or preferential;**
- d. In the public interest; and**
- e. Consistent with other applicable standards of governmental authorities.**

The Commission provided in Order No. 672 general guidance in the form of 15 criteria regarding how the Commission will evaluate a proposed reliability standard to determine whether it meets the legal standard of review. These criteria directly support the stated objective and its subparts outlined above. Therefore, by satisfying the Commission's criteria for approval of proposed standards, NERC demonstrates its success in meeting the stated objective. On this basis, NERC has created a regulatory filing template for new and significantly revised reliability



standards that directly address each of the criteria. The Commission has affirmatively acted on each NERC Reliability Standard request for approval since July 2006 (exclusive of interpretations, VRFs, and VSLs) which demonstrates that the standards NERC has developed and submitted to the Commission satisfactorily meet the Commission's criteria for approval.<sup>173</sup>

More specifically, NERC's ROP describe ten characteristics for technical excellence that each proposed reliability standard must meet to be approved. A reliability standard must:

1. Identify the types of entities and geographic scope to which it applies;
2. State its purpose and describe how it contributes to the reliability of the bulk power system;
3. Describe a specific performance requirement not resulting from lowest-common-denominator compromise, yet taking into account costs and benefits;
4. Be measurable, so as to facilitate objective evaluation of compliance;
5. Be based on engineering and operating judgment, analysis, or experience;
6. Be complete and self-contained, independent of external information;
7. Be clear as to the consequences for violation (when viewed in concert with the penalty guidelines);
8. Use clear and unambiguous language;
9. Consist of requirements that can be practically implemented; and
10. Use consistent terminology.

Further, a NERC Reliability Standard must achieve a reliability objective in one or more of eight main categories:

1. The bulk power system should be planned and operated to perform reliably under normal and abnormal conditions;
2. The frequency and voltage of the bulk power system should be controlled within defined limits by balancing real and reactive power supply and demand;
3. Information necessary for the planning and operation of the bulk power system should be made available to those who need it;
4. Emergency operations plans should be developed and implemented;
5. Facilities for communication, monitoring, and control should be provided, used, and maintained;
6. Personnel must be trained, qualified, and must have the authority to implement actions;
7. The reliability of the bulk power system should be monitored on a wide-area basis; and

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<sup>173</sup> In its orders approving proposed reliability standards, the Commission has directed that NERC develop revisions to a number of the standards the Commission has approved.

8. The bulk power system must be protected from malicious physical or cyber attacks.

NERC's rolling three-year reliability standard development plan contains a listing of projects whose scope includes a significant focus on improving the quality of existing reliability standards. This "clean-up" of primarily Version 0 Reliability Standards addresses many of the attributes listed in developing technically excellent standards. In this regard, NERC's reliability standard development effort is clearly focused on achieving the stated objective. NERC provides guidance to its drafting teams in the form of drafting team guidelines that provide further detail using examples on how to achieve the quality objectives required to satisfy the criteria for "technically excellent" reliability standards.

Consistently since NERC was certified as the ERO in July 2006, each proposed reliability standard has been developed in conformance with the Commission-approved and ANSI-accredited reliability standards development process contained in Appendix 3A to the NERC ROP. NERC's template for submitting a SAR requires the submitter to document explicitly which of the eight noted objectives are being addressed by the SAR and proposed standard.

3. **NERC shall develop reliability standards and revise existing standards through a process that is consistent with the following principles:**
  - a. **Openness — Participation in standards development shall be open to all persons directly and materially affected by the reliability of the bulk power system, with no undue financial barriers to participation and participation not unreasonably restricted on the basis of technical qualifications or other such requirements;**
  - b. **Transparency — The standards development process shall be transparent to the public;**
  - c. **Consensus-building — The standards development process shall build and document consensus with regard to the need for, justification for, and content of the standard;**
  - d. **Fair balance of interests — The standards development process shall fairly balance the interests of all stakeholders and not be dominated by any single interest category;**
  - e. **Due process — The standards development process shall provide reasonable notice and opportunity for persons with a direct and material interest to express views on a proposed standard and to have their positions considered in the development of the standard; and**
  - f. **Timeliness — Development of standards shall be timely and responsive to new and changing priorities for and threats to the reliable operation of the bulk power system.**

In P 250 of the *ERO Certification Order*, the Commission concluded NERC has established rules that provide for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing reliability standards. The Commission concluded that by using the ANSI-accredited process as presented, NERC satisfies the essential requirements for openness, transparency, consensus-building, due process, and balance of interests. Through the efforts of the Standards Committee, industry stakeholders, and NERC staff, NERC has faithfully implemented Section 300 of its ROP since its ERO certification and has not materially changed these rules since being certified.

The Standards Committee is responsible for ensuring that the integrity of the RSDP is maintained, including adherence to the process steps. Additionally, by design, any change to the RSDP must be affirmatively supported by the stakeholders.

Since receiving ERO certification in 2006, NERC has actively engaged in 49 standards development projects and 26 interpretations, each one requiring the procession of steps identified in the RSDP. Thus, there are literally hundreds of process steps that were taken in support of this body of work. In all but five instances (discussed below), the steps were implemented in complete accord with the development procedure.

In all cases where a deviation occurred, the timelines driving the need to shorten the steps in the standards process were established in directives by the Commission. As a result, the Standards Program was faced with two conflicting choices:

- Follow the standards process exactly as written in the NERC ROP (including the RSDP) or miss the deadline and thereby violate the Commission's directive, or
- Deviate from the established standards process and meet the Commission's deadline.

For each noted deviation from the established process, the Standards Committee authorized the action in a public meeting that was properly noticed and documented. These approved deviations consisted of:

Deviation to Approving Changes to the RSDP to Address Commission Directive in the *ERO Certification Order*

The first instance of deviating from the process occurred when the Commission directed NERC to file a revised RSDP. In its July 20, 2006 *ERO Certification Order*, the Commission directed NERC to make certain changes to its governance and rules of procedure within 90 days, and some of those changes required modifications to the RSDP. At its August 2006 meeting, the Standards Committee authorized submitting the proposed revisions to the procedure to the NERC Board of Trustees without a stakeholder comment period as is required in the RSDP.

Deviation to Address Commission Directive in January 2007 Non-Governance Compliance Order

The second instance where NERC deviated from its standards development process occurred to comply with the Commission's January 18, 2007 Order on NERC's Non-Governance Compliance Filing.<sup>174</sup> As an ongoing activity initiated by the *ERO Certification Order*, the January 18, 2007 Order included several directives for NERC to modify the RSDP within 60 days, which did not permit sufficient opportunity for NERC to employ its documented review and approval processes. As a result, at its February 2007 meeting, the Standards Committee authorized shorter posting periods than required in the RSDP to meet the Commission's deadline.

Deviation to Address Commission Directive in June 2007 Commission Order for Violation Severity Levels

The third instance where NERC deviated from its standards development process occurred when the Commission directed NERC to replace "Levels of Non-compliance" (in the 83 standards the Commission had approved in Order No. 693) with "Violation Severity Levels" by March 1, 2008. In the fall of 2007, the drafting team assigned the development of VSLs realized it could not meet the Commission deadline if it conducted an additional industry comment period after it substantively revised the assignments in response to comments from the previous industry comment period. At its December 2007 meeting, the Standards Committee authorized the drafting team to deviate from the RSDP, if necessary, by making significant revisions to the VSL assignments following the last comment period and between the initial and recirculation ballots without an industry comment opportunity in order to meet the Commission's deadline.

Deviation to Address Commission Directives in Order Nos. 693 and 890 — Available Transfer Capability

The fourth and fifth instances where NERC deviated from its standard development process occurred in response to Commission directives with specific due dates for filing Available Transfer Capability (ATC)-related standards. At its February 2008 meeting, the Standards Committee's Executive Committee authorized the ATC standard drafting team to make modifications to the set of ATC-related standards, if needed, between the initial and recirculation ballots in order to ballot the standards and file them by the Commission-specified May 9, 2008 deadline. Under the RSDP, standard drafting teams are not permitted to make modifications to proposed standards between the initial and recirculation ballots per the current process. This action was ratified by the full Standards Committee at its February 2008 meeting. The team modified the standards as requested but the ballot pool did not approve them. NERC subsequently requested and was granted an extension to the due dates for filing these standards with the Commission. The drafting team then processed the proposed standards in accord with the development process steps, except as noted below.

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<sup>174</sup> *North American Electric Reliability Corporation, Order on Compliance Filing*, Docket No. RR06-1-003 (2007) (January 18, 2007 Order).

At its October 2008 meeting, the Standards Committee's Executive Committee authorized the ATC standard drafting team to make clarifying modifications to the set of ATC-related standards, if needed, between the initial and recirculation ballots. This action was ratified by the full Standards Committee at its November 2008 meeting.

#### Additional Project Planning Activities

The Standards Program established the Manager of Standards Development position in 2006. The Manager of Standards Development is responsible for updating the RSDP, and modified the input process to the plan so that it provides the opportunity to collect information from a wider constituency. In updating the standards development plan for 2009, the Standards Program sought input from each program area, each of NERC's technical committees, and trade and professional organizations. While fewer ideas were generated than hoped for, the standards program sees the progress made as the "first step" in moving forward to transform the plan from one that necessarily "cleaned up" existing standards to one that identifies requirements which may be needed to fill new or emerging reliability-related areas and provides the sound technical foundation for doing so.

Some of the further improvements implemented to improve project management and communication of project schedules include:

- Reporting individual project status to the Standards Committee at every monthly meeting,
- Communicating vacant drafting team positions in the NERC News,
- Posting vacant drafting team positions on the "Standards Under Development" Web page,
- Posting individual project schedules on the "related files" page for each drafting team, and
- Updating project schedules to provide a three month "look ahead" in order to coordinate project schedules such that the number of documents posted for stakeholder review is manageable.

Since certification as the ERO in 2006, NERC has undertaken a number of activities that demonstrate its commitment to improve the overall effectiveness of the reliability standard development processes. These activities were manifested in the 2006-2008 Standards Program goals. A listing of the specific improvements beyond those identified in those goals is presented in summary fashion below.

#### Staffing

The NERC Standards Program staff has grown since 2006 from a staff of seven to a complement of fourteen. There are sufficient standards development coordinators to manage the number of projects included in the three-year Reliability Standards Development Plan on a forward-looking basis, although in its revised budget for 2009, NERC has provided for

additional consulting resources to support expedited completion of certain standards projects, including projects involving revisions to Critical Infrastructure Protection Standards. Two additional standards development coordinators are required to manage, in a timely manner, the significant number of interpretation requests NERC has received and expects to continue to receive for the foreseeable future. These two positions, as well as an additional standards process manager, are tentatively included in the 2010 NERC Business Plan and Budget. Additionally, one vacant position was transformed into a regulatory filing support position to ensure more timely filings of new or revised reliability standards.

### Standards Process Revisions

2007 Goal — Shorten average development time to 12 months through stakeholder ballot for high priority standards. Limited progress was made. The Standards Program took an aggressive stance with projects that had a regulatory-issued deadline and timelines were achieved. However, this was not a favorable approach due to the tendency to truncate development discussions. Generally, reaching consensus on complex reliability-related issues is not always achievable in a short time frame; this effort benefits from the full opportunity for industry stakeholders to consider and opine.

2008 Goal — Integrate the definition of “adequate level of reliability” into the standards development process. The Standards Committee directed that the revisions to the RSDP include the definition of “adequate level of reliability” and the proposed modifications to the procedure do include this.

2008 Goal — Track adherence to the standards process. The Standards Program has tracked its adherence to the process and filed reports of identified deviations with the NERC Compliance and Certification Committee.

2008 Goal — Evaluate and improve ballot performance. The Standards Program made good use of the balloting software to remind balloters to cast their ballots before the end of the ballot window. All but one standard being balloted achieved a quorum in 2008. Several standards did not receive a sufficiently high approval vote to “pass” but these standards had undergone an expedited process to achieve a specific deadline and the drafting team had moved the standards to ballot before there was sufficient industry consensus on them.

2008 Goal — Flatten the standards process by increasing the number of conference calls, Web casts, and e-mail actions to greater than 50 percent for all committee and drafting team meetings. The Standards Committee and most drafting teams achieved this goal.

2008 Goal — Implement a strategy for shortening standard development time. The Standards Program has identified ways of shortening the development time by revising some steps in the standards process, by improving the planning done by drafting teams in developing and adhering to project schedules, and by appointment of a single drafting team to address both the SAR and standard. The strategies have not been implemented yet but are being considered by the Process Subcommittee of the Standards Committee.

IT Tools

2006 Goal — Use an automated electronic tool to manage stakeholder comments on standards and SARs. In 2006 and through part of 2007, stakeholders submitted comments using MS Word documents via e-mail.

2008 Goal — Develop a relational database for standards management. The only portions of the relational database that have been completed are associated with registration and balloting. Additional work is needed but was stopped due to the pending availability of the standards database in support of the compliance data management system, thereby avoiding the duplication of effort and resources.

2008 Goal — Implement new application for comment handling and nomination processing. The “Checkbox” survey software has been installed and is in use for handling comment forms and has reduced cycle time for providing comments to the drafting teams following the close of a comment period.

Communication — Workshops

2006-2008 Goal — Hold two workshops. The Standards Program held two workshops in each of 2006, 2007, and 2008, the last of which was a joint workshop with the Compliance Program.

Communication — Website

2006 Goal — Standards users are able to seamlessly access NERC Reliability Standards and related NAESB business practices. NERC provided a link to the NAESB site, but did not develop any method of “seamlessly” accessing related business practices. Cost considerations associated with use of NAESB business practices prohibit the seamless access originally envisioned.

2006 Goal — Standards Web pages are redesigned to facilitate easier user access to approved standards (both those in effect and those with future effective dates), standards under development, and pending requests for standards. Improvements through reorganization of the standards content were made in 2006.

2007 Goal — Post standards under development, standards pending board approval, and pending requests for standards. In 2007 the “Standards Under Development” Web page was redesigned to meet this goal.

2007 Goal — Conduct pre-ballot WebEx meetings for each drafted standard. This goal was met. Some projects included changes that did not warrant a pre-ballot WebEx meeting.

2008 Goal — Formalize a feedback loop for continuous improvement. The Standards Program implemented a “standards suggestions and comments” form accessible from the standards Web site for use in submitting suggestions for new or revised standards. The

Standards Program actively sought input from other program areas and from the technical committees and trade organizations when developing its update of the development plan. The form remains available as an ongoing vehicle for identifying issues to be addressed in reliability standards.

2008 Goal — Survey stakeholders and drafting team chairs for input into the process with a goal of indentifying opportunities for improvement. The Standards Program conducted an electronic survey and a conference call with drafting team chairs to solicit ideas for improvements to the standards process.

#### Communications with Regulators

2006 Goal — Conduct an informal conference with United States and Canadian regulators to review 2006 results of the Standards Program and to receive concurrence on the 2007 standards development plan. The Standards Program held an informal WebEx conference with regulators in 2006.

2007 Goal — Conduct an informational exchange meeting or conference with North American regulators. The Standards Program director met with all North American regulators in 2007 through the trilateral regulator meetings held quarterly.

2008 Goal — Meet with all North American regulators individually to discuss standards development strategy and issues. The Standards Program has weekly calls with FERC staff on standards development, meets on an as needed basis for specific standards projects, and conducts pre-filing briefings prior to submitting proposed standards for approval. In addition, Standards Program staff, and on occasion, members of the Regional Entities and the Standards Committee members, have met with each individual Canadian provincial regulatory body with oversight of ERO activities in 2008.

#### **4. NERC will develop and revise reliability standards through the activities of volunteer technical experts and stakeholders under the facilitation of NERC's professional staff, ensuring that standards development teams have the technical resources and capabilities required to develop technically sound standards.**

NERC continues to employ the standards development process that was contained in its ERO certification application. This process requires reliability standards to be developed utilizing volunteer industry experts with the support of NERC Standards Program staff. NERC, including its staff and the board, cannot unilaterally develop reliability standards that were not developed using the industry-based development process contained in the RSDP. NERC has faithfully implemented this model by implementing the ANSI-accredited development process since 2003 and continues to faithfully execute the process as it continues to initiate and complete projects in its three-year development plan. For each of the 49 development projects and 26 interpretations undertaken since July 2006, under the control of its Standards Committee, a drafting team has been appointed consisting of industry stakeholders with subject matter expertise on the standards or interpretations to be addressed by the drafting team. These teams generally consist of 12-15 representatives with sufficient geographic diversity from a broad



spectrum of the ten industry segments that comprise the RBB. An industry team leader is selected to chair the team and the project activities, working with the support of a NERC standards staff coordinator specifically, and the standards program staff in general, including significant efforts by the Standards Process Manager to ensure the quality assurance of the presented standards and associated documents.

In addition to the standard drafting teams, NERC, through its Standards Committee, also appoints a SAR drafting team that is assigned to refine the scope of a SAR based on industry feedback collected during industry postings associated with the SAR. SAR drafting teams are not required by the RSDP, but they have provided great benefit in effectively processing a proposed standard request and formulating a framework for the standard drafting team to use in drafting the requisite standard. SAR drafting teams are not assigned for processing interpretations and urgent action SARs, since the latter requires the submitter to propose the SAR and standard concurrently. If accepted by the Standards Committee, the urgent-action standard proceeds to the ballot process without an industry comment opportunity. An approved urgent-action standard must proceed through the regular standards development process within a limited timeframe following initial approval.

To assist the standard drafting teams in the effective completion of its objectives, the Standards Program has implemented the following goals and additional activities since ERO certification in July 2006. (Also identified are several opportunities for improvement to enhance the effectiveness of the industry-based standard drafting teams.)

- Documents to Support Drafting Teams
  - 2006 Goal — Develop a guide for drafting teams to improve consistency and efficiency of the drafting teams. The Standards Program developed a “Drafting Team Guidelines” document and distributed the document to all teams for use.
  - 2007 Goal — Publish revised drafting team guidelines to improve consistency and efficiency of the drafting teams. A revised set of Drafting Team Guidelines was developed and distributed to drafting teams in 2007.
  - 2008 Goal — Improve the training of drafting teams and drafting team guidelines. The Standards Program worked with the Compliance Program to develop a set of guidelines for developing measures and compliance elements and worked with the Standards Committee to issue a set of guidelines on good “requirements”.
  - 2008 Goal — Clarify roles and responsibilities of participants in the standards development process. The roles and responsibilities have been undergoing iterative clarifications since mid 2007. In March 2009, the Standards Committee approved a document entitled *Roles and Responsibilities: Standards Drafting Team Activities*.
- Documents to Support the Standards Process:
  - 2008 Goal — Develop detailed procedures for standard drafting teams, coordinators, and NERC support staff activities. The Standards Program worked with the Standards

Committee to develop formal procedures for handling errata, for authorizing the posting of supporting documents and for authorizing field tests.

5. **NERC will develop, maintain, revise annually, and implement a forward-looking work plan for standards development and revisions to ensure that new standards are considered for development, and existing, approved standards are considered for revisions, as warranted by changing needs and conditions, including new and changing priorities for and threats to the reliable operation of the bulk power system.**

The Standards Program develops and annually updates a three-year development plan with goals and associated timelines for the development of specific standards projects. The first version of the three-year development plan was prepared in December 2006, and addressed the 2007-2009 timeframe. This three-year plan has been updated annually and filed with United States and Canadian regulators. The timelines contained in the development plan were developed not as “hard” deliverable dates, but rather were intended to be flexible with recognition of the many variables that could impact the development timelines once the drafting teams began deliberating on the issues. In general, the Standards Program has missed most of those goals by an average of six months from the published timelines.

Because the Standards Program relies upon industry volunteers to staff drafting teams and leverages the expertise of those teams to develop standards, as well as the Standards Committee, itself an industry based committee, to support the execution of the Standards Program’s work plans, NERC and its Standards Program staff must collaborate with these groups to achieve its objectives. In short, each annual work plan, and the specific projects therein, include a set of assumptions, and some of those assumptions were more accurate than others on specific projects. The major factors that impacted the delivery schedules of these projects are discussed below.

The earliest versions of the RSDP did not allow the Standards Committee the flexibility to delay action in developing properly submitted SARs. Although changes made to the standards process now give greater flexibility to the Standards Committee in accepting and processing new SARs, it has been reluctant to do so. Thus, there was no instance from 2006 through 2008 where the Standards Committee delayed posting a SAR that it accepted, thus initiating the standard development process. Several of the SARs the Standards Committee accepted were not originally identified in the Standards Program’s three-year development plans and once accepted for development, required the support of resources that had been designated for use with other projects. This has caused delays in initiating some planned projects that were contemplated by the development plan.

In 2006, there were two unanticipated SARs for projects that were submitted to the Standards Committee that had not been included in the 2006 development plan. In 2007, there were four new SARs for unanticipated projects, and in 2008 there were five unanticipated project requests. In addition, there were two requests for formal interpretations in 2006, eight in 2007, and seven in 2008. In January through May 2009, there were five unanticipated new projects, and fourteen requests for interpretations were received.

Beyond these projects that were proposed by stakeholders, the Standard Program responded to several Commission Orders by initiating projects to make modifications to approved standards.

Three of the most resource-intensive standards development efforts undertaken by the Standards Program in the first three years as the ERO were aimed at improving the initial set of standards submitted and approved by the Commission (referred to as Version 0 standards). Some of the improvements to the Version 0 standards were self-directed, and others were undertaken as a result of a Commission directive, but each was aimed at either developing or improving the compliance elements of the standards, and not on improving the requirements. Because the scope of these projects involved many if not all standard content areas, each project required the commitment of resources from every content area and therefore limited the availability of resources to develop new or improve existing standard requirements. These three projects were:

- Missing Measures and Compliance Elements — (project needed to support initial sanctions table) added measures and compliance elements to 20 standards — started in 2005 and approved by its ballot pool in October 2006.
- Violation Risk Factors — (project needed to support new *Sanction Guidelines*) added VRFs to every Version 0 standard that had been submitted to the Commission — started in December 2005 and approved by ballot pools in early 2007.
- Violation Severity Levels — (project required to address Commission directive) replaced levels of noncompliance with VSLs in 83 standards — started in July 2007 and completed in February 2008.

In 2006, the Standards Program worked with the Standards Committee to develop a multi-year development plan to improve the overall quality of the Version 0 standards, to continue work on Version 1 standards that were already under development, and to initiate new projects to support improvements to reliability, particularly in areas identified as causal or contributing to blackouts. The 2006–2008 standards development plan was very ambitious, and assumed that most Version 0 standards could be revised with no more than two industry comment periods. There were three significant reasons why the original project schedules were understated:

- Clarifying Vague Requirements — In developing the schedule for Version 0 “clean up,” there was an assumption that the focus of the work would be on “refinement” of existing requirements, and most of the work would be aimed at wording changes that would clarify, but would not change the intent of the requirements. As work progressed in this area, the Standards Program discovered that the language in the NERC voluntary Operating Policies and Planning Standards was deliberately vague in many areas, reflecting the best consensus that could be achieved at the time the former policies and standards were developed. As drafting teams attempted to add clarity to Version 0 standard requirements, the teams were obligated to clarify these ambiguities and obtain stakeholder consensus, which resulted in the need for more industry comment periods,

and many more meetings than originally anticipated. Thus, the original Version 0 project development schedules (timelines) were understated.

- **Revisions Midstream to Address Commission Orders** — When the Commission issued Order No. 693 and Order No. 890 that directed numerous changes to the 107 standards then proposed by NERC for approval, drafting teams were already working on refinements to Version 0 standards, and the scope of those projects did not include addressing the directives from these two Orders. The many drafting teams supporting these projects had to stop their work, study the Orders and associated directives, and expand the project scopes to incorporate the directives. In some cases, the teams had to change requirements already drafted. This activity caused many delays with negative impacts on projected development timelines. Drafting teams also experienced further delays in situations where a team needed clarification on a directive and sought informal advice from Commission staff before proceeding. These issues occurred primarily in 2007 during which the roles and responsibilities and relationships between Commission staff, NERC staff, and drafting teams were initially being implemented.
- **Start-up Processes** — As expected in a start-up environment, the commencement of NERC's activities as the ERO in July 2006, required a focused effort to "start-up" the processes outlined in the NERC ROP. One of the significant undertakings for the Standards Program was the development of its three-year standard development plan, with the first version published in late 2006 covering the 2007-2009 time period. To support the implementation of the plan, NERC needed to double its Standards Program staffing to ensure sufficient facilitators were available for each identified project. There were delays in finding and then hiring the needed staff that resulted in delays in the project schedules. These individuals then required training on the standards development process. New, and in some cases, existing drafting teams were organized with new facilitators, resulting in slower progress than expected.

In its Order issued January 18, 2007 in Docket RR06-1-003, the Commission directed that NERC's three-year performance assessment report should identify how long each new reliability standard or modification under development has taken up to that point, provide an analysis of the reasons for delay in developing timely reliability standards or modifications to existing standards, address the Commission's concerns and specific orders for new or modified reliability standards and compare progress with NERC's Standards Development Plan, and discuss the effectiveness of the RSDP with respect to timely development of standards, including possible changes to the RSDP or other resolutions to improve timeliness of standards development.<sup>175</sup> NERC has prepared an analysis of the duration of each standard development project initiated since January 1, 2002 (including projects currently in progress). The results of that analysis are separately provided in **Appendix A** at the conclusion of this **Attachment 1**. As shown by that analysis, the average duration for completed standards projects from the initial SAR to approval of the new or modified standard by the NERC board has been 21.7 months, with a median duration of 17.7 months, a minimum duration of 1.6 months and a maximum duration of 80.5 months. The discussion in **Appendix A** identifies factors that have resulted in extended project durations for individual standards projects. Additionally, timeliness of the

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<sup>175</sup> January 18 2007 Order at P 31.

standards development process is an issue raised by a number of stakeholders in their responses to the stakeholder survey and other outreach conducted for purposes of preparing this three-year assessment report. The stakeholders' comments on this issue, and NERC's responses and planned actions to attempt to expedite the standards development process where possible, are discussed in detail in **Attachment 2** of this report.

In the January 18, 2007 Order, the Commission also directed NERC to closely monitor the voting results for balloted reliability standards and to file quarterly reports with the Commission on voting results.<sup>176</sup> The Commission expressed some concern as to whether the super-majority 67 percent weighted segment vote required to approve a standard under the NERC RSDP could pose an obstacle to adopting improved reliability standards.<sup>177</sup> For purposes of this three-year assessment report, NERC has prepared an analysis of the ballot results for the standards projects that were balloted between July 20, 2006 and May 31, 2009. This analysis is also provided separately, in **Appendix B** to this **Attachment 1**. As the analysis shows, there were a total of 51 final ballot events conducted between July 20, 2006 and May 31, 2009, of which 48 were approved by the ballot pool and three were rejected. The average weighted segment approval for the 48 standards that were successfully balloted was 82.26 percent, with a minimum of 67.79 percent. The weighted segment approvals for the three unsuccessful final ballot events were 57.30 percent, 57.37 percent and 59.95 percent. As detailed in **Appendix B**, there were numerous technical issues raised with each of the three standards that did not receive the required weighted segment vote for approval, as shown by comments received with negative ballots. NERC's conclusion based on this analysis is that the 67 percent weighted segment approval requirement has not proved an obstacle to adopting new and revised reliability standards, because (i) 94 percent of the final ballot events over an approximate three-year period resulted in adoption of the proposed new or revised standard; and (ii) although the three standards that were not approved received weighted segment approval votes between 57.30 percent and 59.95 percent (i.e., greater than a simple majority), there were sufficient technical issues raised with each of these proposals to warrant its nonadoption.

**6. NERC will coordinate its reliability standards development and revision activities with the development of business practices by the North American Energy Standards Board (NAESB).**

NERC's Manager of Business Practice Coordination is a voting representative on the NAESB Executive Committee, and participates regularly (often twice a month) in coordination conference calls with NAESB staff to discuss issues of common importance to each organization. NAESB and NERC's Standards Committee Process Subcommittee are investigating ways in which to continue to strengthen the relationship between NERC and NAESB, such as through high-level coordination of annual plans and standards project reviews. In addition, NERC's Manager of Business Practice Coordination participates with other senior

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<sup>176</sup> January 18 2007 Order at P 18. NERC filed the initial quarterly report on May 3, 2007, covering January through March, 2007, and has filed a report for each quarter thereafter.

<sup>177</sup> January 18 2007 Order at PP 17-18.

NERC and NAESB staff to review strategic objectives and future year business plans to ensure further alignment.

The following annual program goals and additional coordination activities exemplify the focus the NERC Standards Program has placed on this key interface.

- 2006 Goal — Establish a new procedure for joint development of standards with NAESB. Accomplished in 2006
- 2007 Goal — Establish deadlines with NAESB for joint NERC/NAESB standards and business practices and complete standards work by the specified dates. The Standards Program worked closely with NAESB throughout 2007 but did not establish a set of “firm” deadlines for joint work as the scope of work in the joint projects continued to change shape throughout the year. Instead, the Standards Program worked closely with NAESB to ensure close coordination of changing project schedules and this alternative met the needs of both organizations.
- 2008 Goal — Update strategy and deadlines with NAESB for joint NERC/NAESB standards and business practices and complete standards work by the specified dates. The Standards Program worked closely with NAESB throughout 2008 but did not establish a set of “firm” deadlines for joint work as the scope of work in the joint projects continued to change shape throughout the year. Instead, the Standards Program worked closely with NAESB to ensure close coordination of changing project schedules and this alternative met the needs of both organizations. By example, NERC and NAESB held over 20 joint meetings in the course of developing the final set of ATC-related reliability standards that were submitted in the second half of 2008.
- Since 2006, NERC and NAESB have jointly developed a coordinated set of standards and business practices for the coordination of interchange.
  - NERC developed a set of six ATC-related reliability standards driven by FERC Orders No. 693 and No. 890 and worked cooperatively with NAESB in developing companion business practices.
  - NERC worked with NAESB to split the responsibilities for the Transmission Loading Relief standards into business practices and reliability standards, and jointly developed and published a reference document to support these congestion management standards and business practices.
  - NERC is working closely with NAESB to ensure coordination between the ongoing efforts at both organizations to modify Inadvertent Accounting and Time Error Correction.
  - NERC is currently starting its next major revisions to the Interchange standards, which will also be closely coordinated with NAESB.
  - NERC has jointly discussed with NAESB the future strategy of ownership of reliability and business practice tools.

The NERC-NAESB relationship is strong and well coordinated. In April, 2007, NERC staffed a newly-created position, Manager of Business Practice Coordination, whose primary role is to coordinate the NERC-NAESB relationship that includes, importantly, the development of related NERC Reliability Standards and NAESB business practice standards. This approach has been highly effective in completing several standard projects that include reliability standards and related business practices as well as a number of additional ongoing efforts as contained in the three-year development plan.

**7. NERC shall publicly notice and request comment on proposed Regional reliability standards, and shall evaluate and recommend whether a proposed Regional reliability standard has been developed in accordance with all applicable procedural requirements and whether the Regional Entity has considered and resolved stakeholder objections.**

NERC is responsible for processing and approving Regional Entity reliability standards development procedures and the standards that result from the implementation of those procedures. In 2006, NERC hired a full time manager to support the Regional Entities in this activity. At first, this effort was focused on ensuring that proposed Regional Entity standards development procedures were appropriate for NERC approval. In addition, NERC staff and Regional Entity representatives created a Regional Reliability Standards Working Group (RRSWG) to develop a work plan for addressing the fill-in-the-blank reliability standards that were cited in Commission Orders approving reliability standards. Upon completion of these initial activities, in 2007, the focus of the group then shifted to developing consistent methods to evaluate Regional Entity reliability standards submitted to NERC for evaluation and approval. Currently, the RRSWG is focused on developing Regional Entity reliability standards consistently throughout the United States. In addition to these activities, NERC Standards Program staff has evaluated a total of 22 Regional Entity reliability standards submitted for NERC board approval, and the NERC board has approved 16 of them; one additional Regional standard is expected to be presented to the board for approval in August 2009. Upon consideration of NERC's evaluation, five Regional Entity reliability standards were withdrawn from NERC consideration for further refinement.

The following activities and goals provide a listing of specific achievements in the NERC Regional reliability standards development area:

- 2006 Goal — Four Regional standards procedures were approved by NERC in 2006. Eight Regional standards procedures were drafted and approved in 2006.
- 2006 Goal — Work plan to address fill-in-the-blank Regional standards was approved by applicable regulators and was on schedule at end of 2006. Plans to address the fill-in-the-blank standards were incorporated into the overall Standards Program development plan completed in 2006.
- 2007 Goal — Develop the remaining regional fill-in-the-blank standards. This goal was not met. All but one of the subject standards was under revision at the end of 2007, but none were complete.

- 2007 Goal — Process Regional standards submitted for approval and make recommendations to the board. The standards program processed eight WECC Regional standards submitted in 2007.
- 2008 Goal — Process Regional standards submitted for approval in accord with the NERC ROP. The Standards Program processed 13 Regional standards (8 WECC, 4 MRO, 1 Reliability *First*) submitted in 2008 in accord with the ROP.
- Formed the RRSWG to coordinate on issues of Regional standards consistency.
- Developed a pro forma standards development procedure template for Regions to use as a base for their Regional standards development procedures.
- Developed and refined a set of Web pages to make it easier for stakeholders to locate Regional standards development procedures and Regional standards under development.
- Developed a template for use in assessing whether a Regional standard submitted to the Standards Program has been developed in accordance with the associated Regional standards development procedure.

**B. Organization Registration and Compliance Monitoring and Enforcement Program**

1. **NERC will establish and implement (through its own activities and those of the Regional Entities) a program for identifying and registering those owners, operators and users of the bulk power system that perform functions affecting the reliability of the bulk power system and therefore must comply with applicable requirements of regulator-approved reliability standards. This program will include:**
  - a. **Establishing clear, specific criteria for determining that an owner, operator or user of the bulk power system performs a particular reliability function(s) and therefore should be registered as responsible for complying with the requirements of reliability standards that are applicable to that reliability function(s).**
  - b. **Identifying those owners, operators and users of the bulk power system that perform reliability function(s) and therefore should be registered as responsible for complying with the requirements of reliability standards that are applicable to that reliability function(s).**
  - c. **Establishing and maintaining (including periodically reviewing and updating) a registry of owners, operators and users of the bulk power system that are responsible for performing particular reliability function(s) and for complying with the requirements of reliability standards that are applicable to that reliability function(s).**
  - d. **Establishing and implementing a process for joint registrations by which an entity may be registered for, and responsible for performance of, reliability**



**functions and requirements of reliability standards that would otherwise be the responsibility of other related entities, while ensuring that the joint registration and resulting allocation of responsibility does not result in a reduced level of reliability of the bulk power system.**

- e. Establishing and implementing a process by which entities may appeal registration for a particular reliability function(s).**

Following is a list of the principal activities and achievements of the Organization Registration and Certification Program since NERC was certified as the ERO.

1. Developed a Statement of Compliance Registry Criteria document to delineate the criteria for registration of the functional entities defined in the NERC Glossary of Terms.
2. Worked with the Regional Entities to identify the organizations that should be registered for the specific functions identified in the Statement of Compliance Registry Criteria.
3. Developed a database for registered entity data.
4. Implemented a revision to the NERC ROP to allow two types of Joint Registration Organization (JRO) registrations.
5. Implemented a process whereby a Registered Entity could appeal its registration in the NERC Compliance Registry.
6. Updated the Statement of Compliance Registry Criteria document to include clarifications and additional criteria as necessary in order to ensure an accurate listing of registered entities. The current version of the document is Revision 5.0.
7. As of June 22, 2009, NERC and the Regional Entities identified and registered 1,839 organizations for 4,487 functions. A summary by function and Region is posted on the NERC Compliance Registry Website.
8. Along with the Regional Entities, continuously worked to identify new organizations, verify current registered entity status, and revise the NERC Compliance Registry as appropriate. The NERC Compliance Registry is updated continuously and an updated listing is posted on the NERC Website at least monthly.
9. The NERC compliance registry includes, as of May 31, 2009, 31 JROs comprised of 60 registered entities.
10. As of May 31, 2009, 20 registered entity appeals were ruled on by the BOTCC and 3 appeals are still pending.

In addition, the following activities are in progress:

1. A revision to Section 500 and Appendix 5 of the ROP is currently in progress. This revision will:

- a. Replace the “transitional certification” process with the provisional certification process which will increase reliability of the bulk power system.
  - b. Clarify the JRO process and provide greater explanation of the requirements for the two types of JROs.
  - c. Clarify additional paragraphs of Section 500 and implement re-worded processes and procedures for mandated requirements based on experience gained implementing the existing ROP over the course of the referenced period.
2. The NERC Compliance Registry will be integrated into the NERC Guidance System during 2009 which should improve the ability to revise and update the NERC Compliance Registry.
  3. A process is being developed as a joint effort between the Standard Program and Compliance Program to allow notification to be sent to all registered entities when new or revised NERC standards are approved by regulatory bodies.
  4. A Multi-Regional Registered Entity (MRRE) process is being developed that will allow more consistent and accurate audits of entities that are registered in more than one Region for the same function or functions. This effort is a step toward an ultimate solution in which a registered entity with operations in multiple Regions would be assigned to a single Regional Entity for the purposes of compliance monitoring.

The NERC Compliance Registry has been continuously refined and updated throughout the period since ERO certification, which has increased Compliance Registry accuracy over the period. Additional reports have been generated that allow other departments in NERC the ability to utilize the Compliance Registry information in carrying out their responsibilities. The addition of the JRO capabilities in the Compliance Registry has increased reliability for those entities involved in the JROs. Use of the JRO process has resulted in resolution of several appeals of organization registrations. Finally, the Compliance Registry has also been updated to include NERC Alerts notification capabilities.

2. **NERC shall develop and implement a program for monitoring and enforcing compliance with regulator-approved reliability standards by owners, operators and users of the bulk power system (CMEP) that will promote and ensure reliable operation of the bulk power system and will have the following essential attributes:**
  - a. **Is independent from owners, operators and users of the bulk power system responsible for complying with reliability standards.**
  - b. **Holds owners, operators and users of the bulk power system responsible and accountable for performance of specific actions and activities to maintain reliable operation of the bulk power system.**
  - c. **Utilizes a variety of compliance monitoring processes focused on compliance audits of responsible entities but also using other processes such as self-certification, spot-checking, and self-reports.**

- d. Establishes and disseminates clear, understandable requirements as to what responsible entities must do, provide, or demonstrate in response to compliance audits and other compliance monitoring processes, including documentation requirements, in order to demonstrate the entity's compliance with reliability standards.**
- e. Provides prompt and timely feedback and reports to responsible entities from compliance monitoring processes, including prompt and timely identification of violations of reliability standards.**
- f. Requires a responsible entity that has violated a reliability standard to develop and execute a mitigation plan that will (i) remedy the cause of the violation and (ii) prevent its recurrence.**
- g. Imposes penalties and sanctions on, and directs remedial actions to be undertaken by, responsible entities for violations of reliability standards, with penalties and sanctions bearing a reasonable relation to the seriousness of the violation and the potential consequences to the reliable operation of the bulk power system, taking into account the entity's timely remedial efforts (or lack thereof) and the quality of the entity's overall compliance efforts.**

NERC has delegated compliance responsibilities to eight independent Regional Entities to implement the NERC Compliance Monitoring and Enforcement Program. These Regional Entities carry out their delegated responsibilities under delegation agreements with NERC that have been approved by the Commission. The Regional Entity's governance structure is described in each delegation agreement to provide clarity regarding the Regional Entity's independence and compliance decision making processes. At a staff level, a conflict of interest and work history are recorded for compliance staff personnel to ensure independence.

Some Regional Entities also perform functions as a registered entity responsible for compliance with certain reliability standards (WECC, FRCC, SPP RTO and ERCOT). Such a dual role creates a potential conflict of interest for those specific functions and NERC has implemented processes to either lead or conduct the compliance monitoring activities for the functions where such a conflict may exist.

Within the NERC CMEP, eight monitoring methods are defined for identifying alleged violations of approved reliability standards. These methods are self reporting, self certification, periodic data submittals, exception reporting, compliance violation investigations (CVI), complaints, spot checks, and compliance audits. The Regional Entities hold periodic workshops and provide registrants with notifications regarding specific reporting criteria and processes. NERC actively reviews, approves, and monitors the activities of each Regional Entity. Violation findings from the Regions are tabulated and reported to the NERC Board of Trustees. Violation trends and anomalies are identified by NERC staff and investigated accordingly by NERC.

Self reporting has been, and still is, the most common method by which alleged violations are identified. Self reports have trended downward from the inception of the program as registered entities develop more rigor within their companies and compliance programs are further developed. Compliance violations found via compliance audits and CVIs are trending upward as Regional Entity compliance programs mature and more staff is engaged in the process.

Where a violation of a reliability standard is suspected, the relevant facts and circumstances are reviewed, and where they support a finding of violation by the CEA, the CEA processes an enforcement action against the registered entity for the violation pursuant to the uniform CMEP. The registered entity is required to remedy the situation and prevent reoccurrence of the violation via a NERC-approved mitigation plan proposed by the entity. The registered entity may be required to accept revisions proposed by the Regional Entity or NERC to the registered entity's proposed mitigation plan in order for the mitigation plan to be accepted and approved.

Steps are currently being considered, planned, and in some cases implemented by NERC and the Regional Entities to provide for more expeditious processing and closure of notices of alleged violations, notices of penalty, and mitigation plan and to reduce the numbers of outstanding notices of alleged violations. These actions are discussed in greater detail in **Attachments 2 and 3** of this report.

The NERC Annual CMEP Implementation Plan outlines the processes to be used by the Regional Entity for monitoring registered entity compliance for a set of actively monitored reliability standards during the upcoming year. The NERC Compliance Audit Group provides feedback to the Regional Entities' audit staffs regarding their performance on compliance audits and final audit reports.

In general, Regional Entity compliance audit performance has improved throughout 2008, although inconsistencies remain with audit processes among the Regions. These inconsistencies have been noted by NERC and it is a goal for 2009 to drive audit performance uniformity between the Regions. Currently the Regional Entities maintain their own processes for self certification and spot checking. It is NERC and the Regions' goal to drive uniformity for the above mentioned processes. This uniformity will help all industry participants, and in particular registered entities that operate in more than one Region.

The results of all compliance audits are posted on the NERC Website pending completion of due process activities for the registered entity. Notice of Penalties (NOPs) are approved by NERC BOTCC, filed with the Commission and posted on the NERC Website.

NERC compliance staff developed Reliability Standard Audit Worksheets (RSAW) to clearly identify what evidence is needed by a registered entity to show compliance with a reliability standard requirement. These RSAWs are publically posted on the NERC Website and are updated as changes are made to approved reliability standards. Applicable RSAWs are sent to a registered entity at least 60 days prior to an audit as part of the pre-audit questionnaire, as required by the NERC CMEP. For 2009, the RSAW, pre-audit questionnaire and excerpts from

relevant Commission orders have been combined into one document for each approved reliability standard, creating one reference document for the registered entity and Regional auditors to work from in an audit of the standard. The revised RSAWs state what evidence is needed for compliance and give the registered entity the ability to provide additional pertinent information in the questionnaire portion. The Commission Order language provides the Commission's perspective on the intent of the standard or requirement.

NERC is working on developing an online portal and interface to make available current compliance documents. NERC developed and implemented a Compliance Tracking and Reporting Tool with the Regional Entities that utilizes MS Excel reporting workbooks and an MS Access database. This system, while useful, is not production-grade software and requires a good deal of staff interaction by the Regional Entities and NERC to produce reports. A more robust system, utilizing server to server communication, Web service and XML protocol, is currently undergoing testing.

On a daily basis, NERC reviews incoming submittals from Regional Entities via the workbook tool for updates on new or outstanding alleged and confirmed compliance violations, including various documents and records. NERC develops appropriate notices and transmits the reports to the Commission using the portals established by the Commission for ERO/Regional Entity Filings/Submittals/Notifications. Weekly internal outstanding issues summary reports are prepared and issued to NERC compliance management for review and action. Bi-weekly Regional Outstanding Issues Reports, including an overall summary report, are developed and issued to the Regional Entities for action.

Monthly reports are developed that provide trending and tracking for Regional Entity and NERC program metrics including identification of trends related to specific reliability standards and development of violation and mitigation process states. These reports are presented to the NERC BOTCC at each monthly meeting. Confidential quarterly reports are developed and distributed to the Commission in a timely manner that summarize information surrounding violations that have occurred, including the status of mitigation plans. Vegetation-related transmission outage quarterly reports are developed and publicly posted.

NERC is required to provide notice of each allegation of a violation to the Commission within two business days. NERC has met that requirement for all violations where additional information is not required from the Regional Entity. Each subsequent step requires reporting to the Commission. NERC has consistently provided the necessary information to the appropriate Commission portals. To improve the efficiency of this process, NERC is working with the staffs of the ERO governmental authorities to replace the portals system currently in place with a component of the updated data management system previously noted.

All violations of reliability standards must be mitigated by the registered entity. Mitigation plans are correcting, have already corrected and/or are preventing reoccurrence of, over 1,000 violations of reliability standards and thereby promoting and ensuring reliable operation of the bulk power system. Where a violation of a reliability standard is determined by the CEA, the registered entity responsible for the violation is required to remedy the situation and take action to prevent reoccurrence of the violation via implementation of a CEA-accepted

and NERC-approved mitigation plan developed and proposed by the registered entity. If the mitigation plan submitted by the registered entity is not satisfactory, the CEA or NERC will direct changes to the mitigation plan.

A mitigation plan is required from the registered entity upon the alleged violation becoming a confirmed violation. However, registered entities can and are being encouraged by the Regional Entities and NERC to establish and begin implementation of their mitigation plans earlier in the enforcement process, and many are doing so. Under the uniform CMEP, and pursuant to Commission orders, NERC is required to complete its review and approval or rejection of a mitigation plan that has been accepted by the Regional Entity within 30 days after NERC receives the plan from the Regional Entity. NERC has been meeting this timing requirement.

Full completion of a given mitigation plan, including certification of completion – with appropriate evidence – issued by the registered entity and CEA verification of that certification, is commonly occurring well in advance of completion of enforcement proceedings regarding the associated violation(s). Also, many violations being self-reported by registered entities are being reported concurrent with certification and evidence that the reported violations have already been mitigated.

A pro-forma settlement agreement has been developed that can be used for self-reported or self-certified violations of a minor or administrative nature. This approach will allow the Regional Entity to provide the registered entity with an option of either promptly settling the alleged violation or proceeding through the full enforcement action process.

Prior to June 18, 2007, the effective date of Commission-approved mandatory reliability standards, NERC allowed registered entities to self-report violations of the standards and submit mitigation plans, with the understanding that if the mitigation plan was completed on schedule, the entity would not be found in violation of the reliability standard (for the same noncompliance) when it became mandatory and enforceable. There was an unexpectedly large response to this opportunity, with over 5,100 separate violations of reliability standards being self-reported. Of these, over 1,800 were determined by the Regional Entities not to be violations. Registered entities completed mitigation of the remaining 3,300 violations generally before the end of 2007. While this unexpected volume of self-reported reliability standards violations created a very large amount of work for the Regional Entities prior to and after the reliability standards became mandatory, and helped contribute a backlog in processing violations, it also resulted in early mitigation of a significant number of violations of standards by the industry. Regional Entities and NERC successfully processed these self-reported violations and associated mitigation plans. Each report of a violation and the associated mitigation plan in the United States was provided to FERC. The Regional Entities and NERC cataloged, provided, and tracked each violation and its associated mitigation plan to completion.

For the period June 2007 to May 31, 2009, NERC filed 62 NOPs with the Commission regarding, and proposing enforcement disposition for, 175 alleged violations of reliability

standards.<sup>178</sup> With the exception of one NOP (NP09-21-000), all of the NOPs and the dispositions proposed therein were allowed by the Commission to become effective after expiration of the required 30-day period after the filing with the Commission.

Remedial Action Directives can be issued by NERC or the Regional Entity if the alleged violation and surrounding circumstances warrant such action. Remedial Action Directives have been issued directing specific thorough and timely action to address significant situations related to the reliability of the bulk power system.

**3. NERC shall enter into and administer delegation agreements with Regional Entities that provide for establishment and implementation of, and will monitor and direct the Regional Entities in accordance with the regulator-approved delegation agreements in the implementation of, Regional CMEPs having the essential attributes listed in Objective 2 and that have appropriate (i) technical and professional staffing, (ii) procedures, and (iii) internal oversight. NERC's oversight of Regional Entity CMEPs shall include periodic audits of their CMEPs.**

The discussion under purpose and objective 2 above describes NERC's entry into delegation agreements with the Regional Entities to implement the CMEP, and NERC's activities in administering Regional Entity activities and working with them to implement the CMEP.

As required by Section 400 of the NERC ROP, NERC is developing the Regional Entity audit program to meet the objective of determining the Regional Entities' compliance with the delegation agreements and the NERC ROP including the CMEP. Concurrent with the development of the Regional Entity audit program, NERC and an independent auditing firm retained by NERC will make recommendations which will improve NERC's CMEP processes and implementation efficiencies. These recommendations will be communicated to the NERC CEO and Compliance Vice President and Director via a management letter.

The planning of the Regional Entity audit program began in July 2008, with the actual development of the program commencing in October 2008. Listed below are major accomplishments and milestones of this project.

Mid-July 2008

- Soliciting project bids from four independent auditing firms

August 2008

- Received proposals
- Auditing firms presented proposals to NERC executive management
- NERC selected audit product

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<sup>178</sup> Additional NOPs have been filed with the Commission in June 2009.

- NERC communicated audit scope to the Regional Entities and the Commission

September 2008

- NERC selected audit firm for project
- Contract negotiations began

October 2008

- Contract finalized
- Development of Regional Entity audit program began
- NERC communicated projected timelines and status to the Commission

December 2008

- 100 percent criteria developed
- 88 percent reviewed by NERC process owners
- 26 percent reviewed by auditing firm's technical review team
- Draft sampling methodology developed
- 25 percent sent to Commission for review and comment
- Reliability*First* audit scheduled

January 2009

- Sampling methodology finalized
- Questionnaire developed
- Request for information (pre-audit documentation) determined
- 100 percent reviewed by NERC process owners

The Regional Entity audit program criteria contain all auditable compliance-related requirements as specified in the Regional Entity delegation agreements and the NERC ROP including Appendices 4B, 4C and 5. As such, the specifications for determination of the Regional Entity's (i) staff's technical and profession qualification, (ii) procedures, and (iii) internal oversight are contained within the developed criteria. The first Regional Entity audit (Reliability*First*) was conducted in March 2009. Following the implementation of the first Regional Entity audit, the audit team, consisting of an independent auditing firm and NERC, performed a lessons-learned analysis with the objective of determining recommendations for any audit process improvement items. NERC will schedule and perform four additional Regional Entity audits during 2009.

Concurrent with the implementation of the Regional Entity audit program, NERC and the independent auditing firm will identify improvement items associated with the audited Regional Entity's processes and procedures associated with its implementation of the CMEP. These



recommendations will be communicated via a management letter to the NERC CEO and the CEO of the audited Regional Entity.

Beginning in 2009, NERC has hired a Director of Regional Operations responsible for developing and executing infrastructure to support successful Regional Entity operations; developing and reviewing operational reports and metrics and monitoring productivity of the Regional Entities for all areas of delegated responsibility; monitoring and communicating performance issues to ensure needed improvements are implemented; and developing and maintaining standard operating procedures, program implementation tools, and reporting procedures to support the NERC ROP.

- 4. NERC shall develop and implement, and require the Regional Entities to implement, hearing and appeal procedures that:**
  - a. Will be available to owners, operators and users of the bulk power system to dispute alleged violations of reliability standards, proposed penalties and sanctions, proposed components of mitigation plans, and remedial action directives.**
  - b. Provide due process; and**
  - c. Provide for efficient and expeditious resolution of disputes.**

The Regional Entity Hearing Procedures are included in the NERC uniform CMEP (Attachment 2) and, where there are deviations, in Exhibit D to the Regional Entity's Delegation Agreement. The Hearing Procedures were developed through a collaborative process by the Regional Entities and NERC, and have been approved by the Commission in a series of orders.<sup>179</sup> The Hearing Procedures provide the opportunity for a registered entity disputing a notice of alleged violation, proposed penalty or sanction, mitigation plan provision or remedial action directive to have a due process hearing on the matter before the Regional Entity hearing body. If the registered entity receives an adverse ruling from the Regional Entity hearing body, Section 5.5 of the uniform CMEP and Section 1.7.10 of the Hearing Procedures provides that the registered entity may appeal the decision to NERC pursuant to Section 410 of the ROP. The appeal will be heard and decided by the NERC BOTCC.

To date, no disputes over notices of alleged violations, proposed penalties, mitigation plans or other matters of enforcement in any of the Regions have gone to hearing, and no Regional Entity hearing body has had occasion to render a decision on a disputed compliance matter. Therefore, while as noted, NERC and the Commission have approved the Regional

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<sup>179</sup> The Hearing Procedures, in essentially their current form, were conditionally approved by the Commission in *Order Addressing Revised Delegation Agreements*, 122 FERC ¶ 61,245 (March 21, 2008), subject to compliance with a number of directives requiring revisions to the Hearing Procedures. In an order issued June 1, 2009, the Commission approved the final round of revisions to the Hearing Procedures in response to previous directives. *Order on Compliance Filing*, 127 FERC ¶61,209 (2009).

Entities' Hearing Procedures, NERC has no basis in experience to assess the effectiveness and fairness of these hearing procedures as applied in actual cases, nor the manner in which the Regional Entities have implemented the Hearing Procedures.

5. **NERC shall establish and implement, and cause the Regional Entities to establish and implement, appropriate procedures to maintain the confidentiality of information obtained and shared during compliance audits and other CMEP processes, including dispute hearings and appeals.**

The NERC uniform CMEP, which the Regional Entities are required to follow in conducting compliance monitoring and enforcement activities, require NERC and the Regional Entity to maintain information obtained during the compliance processes as confidential, in accordance with Section 1500 of the NERC ROP, until a notice of confirmed violation and penalty or sanction is filed with the Commission.<sup>180</sup> In addition, hearings before a Regional Entity hearing body are non-public proceedings, and the proceedings and all written testimony, exhibits, transcripts, briefs, rulings, and other documents in the hearing process are non-public and are to be maintained as confidential by the participants, including the Regional Entity.<sup>181</sup>

The Regional Entity compliance audit program will audit and evaluate the Regional Entity's confidentiality and non-disclosure processes.

6. **NERC shall monitor and ensure consistency among the Regional Entity CMEPs with respect to:**
  - a. **Organization registration determinations.**
  - b. **Determinations of violations of reliability standards.**
  - c. **Impositions of penalties and sanctions for violations of reliability standards.**
  - d. **Development and oversight of mitigation plans by registered entities in response to violations of reliability standards (*i.e.*, comparable mitigation plan elements shall be required across Regional Entities in response to comparable violations of a reliability standard).**

The NERC Organization Registration group has used feedback from industry groups, stakeholders, and other NERC departments to cross-reference the current NERC Compliance Registry data with registration data submitted by the Regional Entities. In 2009, NERC is initiating a project to identify all registered entities in the bulk power system by function inter-relationships, which will verify the current registry and identify any missing registrants and any possible undesirable reliability-associated overlaps of functional footprints.

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<sup>180</sup> See Sections 8.0 and 9.3 of the uniform CMEP.

<sup>181</sup> See Sections 1.2.13 and 1.5.10 of the Hearing Procedures (Attachment 2 to the uniform CMEP).

As called for in the CMEP and by explicit direction in Commission Orders, NERC undertakes substantive review of all of the enforcement findings of its Regional Entities and the associated enforcement dispositions proposed by the Regional Entities wherever violations are determined. The purpose of the reviews includes NERC meeting its ERO obligation of ensuring consistency in the determination of violations of the reliability standards. Regional Entities, with limited exceptions, perform the bulk of the work regarding determination of whether a violation of a reliability standard has occurred. NERC conducts audits of the Regional Entity programs and field work, as previously described.

NERC reports monthly to the BOTCC all violations of reliability standards, statistics highlighting the most frequently violated reliability standards, the sources of discovery of the violations, and the status of each violation in the enforcement process, among other things. In each case processed, NERC staff and the BOTCC have taken into consideration the consistency of the enforcement actions with others completed or in process.

As called for in the CMEP and by explicit direction in Commission Orders, NERC approves, after appropriate review, mitigation plans that have been proposed by registered entities and accepted by the Regional Entity. The purpose of the reviews includes NERC meeting its ERO obligation of ensuring comparable elements and timeliness within mitigation plans proposed to address comparable violations of reliability standards. NERC reviews each mitigation plan accepted by a Regional Entity against the criteria established in the CMEP. Any mitigation plans not meeting these criteria are returned to the Regional Entity for additional work by the registered entity.

- 7. NERC shall establish and maintain a program for providing appropriate and timely training to NERC and Regional Entity compliance auditors, and other NERC and Regional Entity CMEP personnel, and for verifying and maintaining their qualifications to conduct compliance audits and other compliance monitoring and enforcement activities.**

NERC developed a Compliance Auditor Manual and implemented lead-auditor training in 2007 in accordance with the General Accounting Office auditing standards. Auditor training was held periodically throughout 2007 and 2008 to ensure all Regional Entity audit staff was trained prior to performing an audit. In 2008 additional training was developed for volunteers that were being used as supplemental staff in some Regions. Also in 2008, an Evidence Gathering module was developed to focus on what constitutes sufficient evidence and evidence stacking. The NERC CMEP requires that all auditors take NERC auditor training and applicable modules prior to participating on an audit team.

NERC maintains a master list of auditors who have completed training. In addition NERC Compliance Program staff reviews and approves those individuals requesting training to assure appropriateness. NERC grants access to the online auditor training for 30 days and then removes the individual's access.

NERC monitors the Regional Entity audit teams to ensure all participants have taken the required training. In 2008 two instances were found where the Regional audit team members did not complete the required training. For 2009, NERC will continue to focus on this requirement by having the Regional Entities self-certify that their audit team members have taken the appropriate training. Also for 2009, the NERC compliance auditor training will be reviewed and updated to include any changes that have occurred with the program. For 2009, NERC is adding additional training for the CIP standards to which some registered entities must be auditably compliant as of July 1, 2009. CVI training may be added in the second half of 2009.

- 8. NERC shall develop and implement, directly through its own personnel and through the Regional Entities, training and education programs on the requirements of reliability standards and the actions and documentation needed to demonstrate compliance; such programs will be directed to and available to owners, operators and users of the bulk power system, through means such as seminars, workshops, printed materials, and website materials.**

NERC recognized the need to effectively and thoroughly communicate its compliance program requirements and processes to stakeholders. NERC developed RSAWs and a Question and Answer resource document to aid the registered entities. These documents are updated as needed and posted on the NERC Website. Also, to effectively communicate the CMEP processes, NERC and the Regional Entities post guidance documents on their Websites that provide additional information for the registered entities as to their responsibilities. The Regional Entities, supported by NERC, perform periodic compliance workshops to alert the registered entities on process changes, requirements, and industry trends.

NERC is working with the Compliance and Certification Committee to receive collective industry feedback regarding NERC and the Regional Entities' communications. To date, the tone of the feedback has been positive. The industry is very receptive toward communication efforts and continues to ask for more transparency. As a result, NERC has stepped up this effort, developing a cross-functional team between the NERC Compliance Program and the NERC Standards Program to answer questions regarding reliability standards that the registered entities are asking.

For 2009, NERC is developing a database to systematically collect industry feedback and communicate NERC determinations to relevant parties in a user friendly reporting manner. This is a major NERC initiative as it will include resources, at a minimum, from IT, Compliance, and Standards.

### **C. Reliability Readiness Evaluation and Improvement Program**

NERC terminated the Reliability Readiness Evaluation Program as of the end of the first quarter of 2009. The reasons for terminating this program have been explained at length in previous filings.<sup>182</sup> However, for purposes of this three-year performance assessment report, it is

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<sup>182</sup> See *Request of the North American Electric Reliability Corporation for Acceptance of its 2009 Business Plan and Budget and the 2009 Business Plans and Budgets of Regional*

appropriate to review the origins, objectives, and accomplishments of the Readiness Evaluation Program.

1. **NERC shall establish and implement a program for conducting evaluations of operators of the bulk power system that perform reliability functions (including in particular balancing authorities, transmission operators, and reliability coordinators), to provide guidance and feedback to these entities to:**
  - a. **Ensure they have the facilities, tools, processes, and procedures in place to carry out their reliability functions appropriately under future conditions.**
  - b. **Enable these entities to achieve operational excellence in the performance of their reliability functions.**

NERC initiated the Reliability Readiness Evaluation Program (originally called the Reliability Readiness Audit Program) in response to evaluations of the causes of the August 14, 2003 Northeast blackout. On February 10, 2004, the NERC board approved a recommendation of the NERC Steering Group for the August 2003 Blackout Investigation to initiate a Readiness Audit Program to assess the readiness of bulk power system operations in North America. NERC conducted its first Readiness Audit on March 8, 2004. The initial three-year cycle of readiness audits took place in 2004 through 2006.<sup>183</sup> The goal was to increase transparency on operating practices and to assess the industry's overall preparedness to minimize the likelihood of another major blackout. When the Commission approved NERC as the ERO and began adopting NERC Reliability Standards as mandatory in the United States, NERC created a compliance audit program. The readiness program, which had been asking compliance-type questions, shifted its full effort to encouraging entities to improve reliability performance and achieve excellence in their assigned functions and responsibilities.

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*Entities and for Approval of Proposed Assessments to Fund Budgets*, filed August 22, 2008 in Docket No. RR06-8-000; *Compliance Filing of the North American Electric Reliability Corporation in Response to October 16, 2008 Order on 2009 Business Plans and Budgets*, filed December 15, 2008 in Docket No. RR08-6-002, at 18-34. The decision to terminate the Readiness Evaluation Program was accepted by the Commission in its Order issued July 16, 2009. *North American Electric Reliability Corporation, Order on Compliance Filing*, 128 FERC ¶61,025 (2009), at PP 22-28.

<sup>183</sup> In their analyses of the causes of the August 2003 Northeast blackout, NERC and the U.S.-Canada Power System Outage Task Force both recognized a need to assess the vulnerability of the bulk power system in North America to similar events. See, e.g., *Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations*, U.S.-Canada Power System Outage Task Force, April 5, 2004, at 156 (Recommendation 18), noting that NERC and the Regional reliability councils were jointly establishing a program to audit the reliability readiness of all reliability coordinators and control areas within three years and continuing thereafter on a three-year cycle, with 20 audits of high priority areas to be conducted by June 30, 2004.

The readiness program worked with industry experts to conduct on-site evaluations of all balancing authorities (BAs), transmission operators (TOPs), reliability coordinators (RCs), and other entities that support the reliable operation of the bulk power system in North America to determine their readiness to maintain safe and reliable operations. Operating under the principles of being open, fair, transparent, and inclusive, the evaluations identified strengths and areas for improvement in an effort to promote excellence in operations among these organizations. The evaluation process was based on the following six fundamental aspects of reliability:

1. Culture — The corporate organization provides the necessary leadership and management for system operations to sustain high levels of safe, reliable operation.
2. Operations — Operations personnel monitor and control the system in a manner that ensures safe, reliable operation.
3. Maintenance — Maintenance is conducted by skilled personnel to achieve safe, reliable control center equipment and system performance.
4. Operational planning — Operational planning provides the technical information and support necessary for safe, reliable system operation.
5. Training — Training in both specific job-related skills and broader technical fundamentals is used to provide highly skilled, knowledgeable personnel for safe, reliable operations, and to achieve performance improvement.
6. Infrastructure — System operators must be provided with effective, reliable computer facilities for data and status monitoring and communication facilities for voice communication at both the primary and the backup control facilities. Access to control rooms and critical computer facilities must be controlled for physical and cyber security reasons.

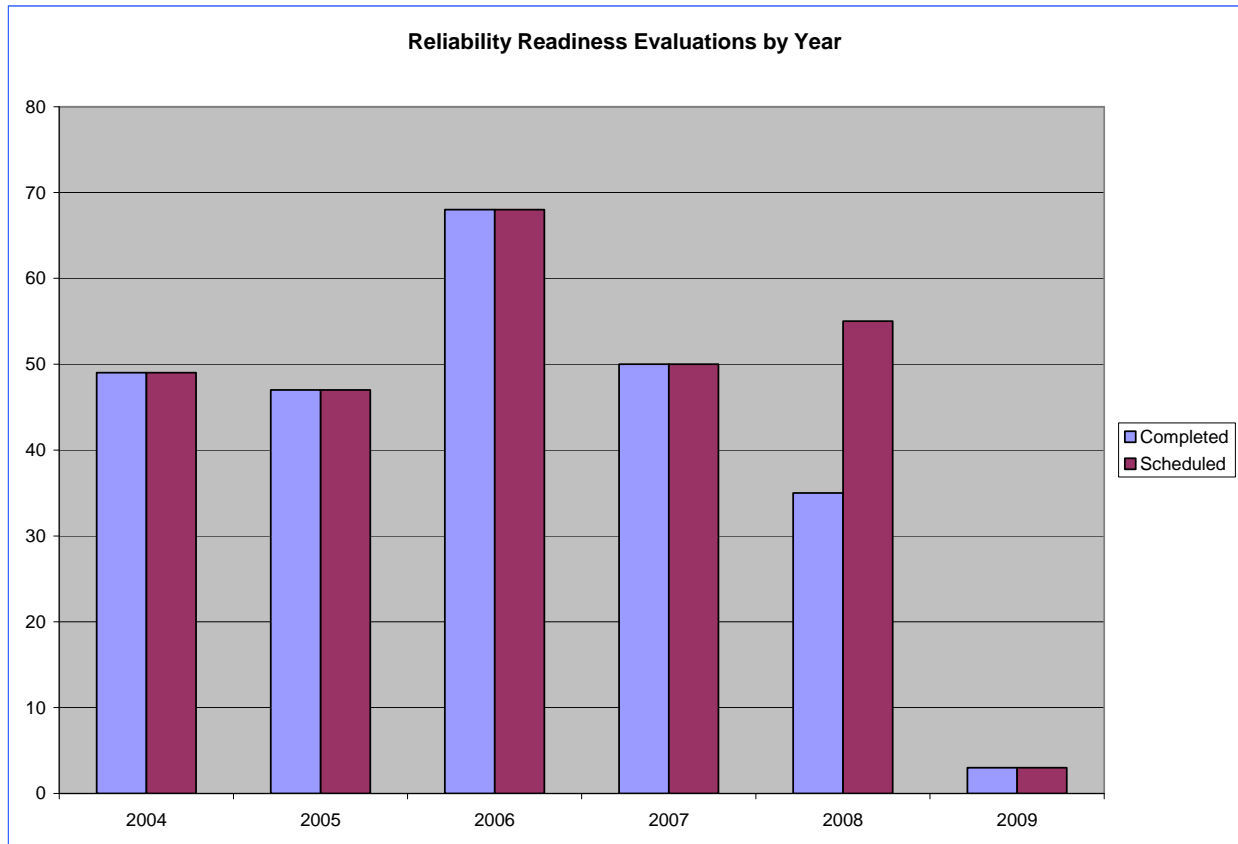
The readiness evaluation teams, each led by a NERC staff member and a senior Regional representative, included industry volunteers with considerable expertise selected to provide representation from other interconnections, other Regions, and neighboring operating entities. The teams also typically included representatives from the Commission staff.

The readiness evaluation teams independently reviewed the operations of reliability entities, noted positive observations and made recommendations for improvement. Final evaluation reports were posted on NERC's Web site, with any infrastructure discussion redacted from the public report. The recommendations, if implemented, would enhance the entity's readiness to operate reliably and maintain the reliability of the bulk power system.

Readiness evaluations were conducted on a three-year cycle with approximately 50 to 60 evaluations completed per year. As noted above, NERC conducted its first Readiness Audit on March 8, 2004. The initial three-year cycle of readiness audits took place in 2004 through 2006. In February 2007, NERC began a second three-year cycle of reliability readiness evaluations.

From March 2004 to March 2009, NERC completed a total of 252 on-site evaluations (see Figure 1 below). A total of registered 17 Reliability Coordinators (RC), 126 Balancing Authorities (BAL), and 150 Transmission Operators (TOP) underwent at least one NERC readiness evaluation.

Figure 1 – Readiness Evaluations by Year



Additionally, 14 Transmission Owners (TOs) that can significantly affect neighboring reliability entities, reliability regions, or load centers of a national interest also completed readiness evaluations, as listed in Table 1.

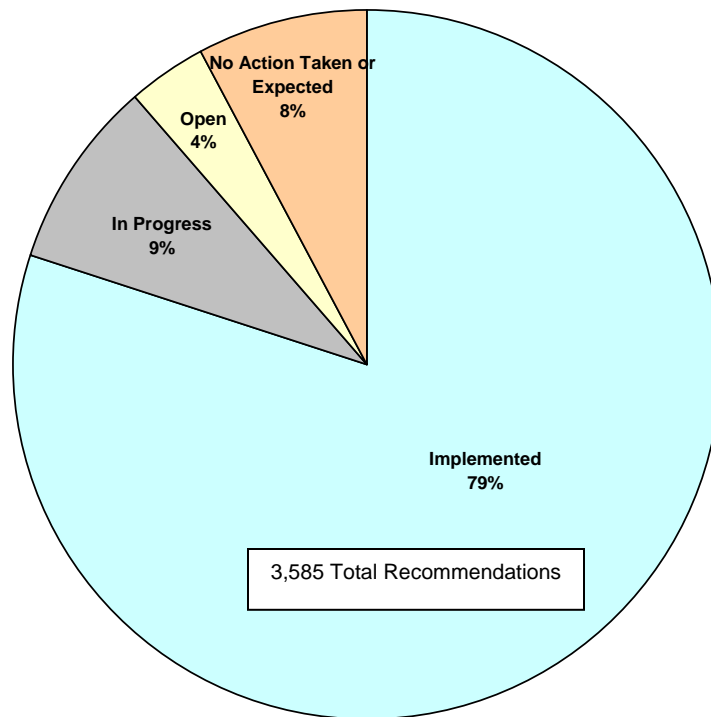
**Table 1 – Readiness Evaluation Conducted for 14 TOs**

<b>Entity Name</b>	<b>Region</b>	<b>Evaluation Date</b>
CenterPoint Energy	ERCOT	11/01/2006
Commonwealth Edison	RFC	11/09/2006
PPL Electric Utilities Corp.	RFC	02/08/2006
PSE&G	RFC	01/25/2006
TXU Electric Delivery	ERCOT	12/13/2006
Baltimore Gas and Electric	RFC	03/28/2007
Dominion Virginia Power	SERC	09/20/2007
Long Island Power Authority	NPCC	05/03/2007
New York Power Authority	NPCC	12/06/2007
PECO Energy	RFC	09/27/2007
ATS – First Energy	RFC	05/22/2008
Rochester Gas and Electric	NPCC	06/19/2008
Potomac Electric Power Co.	RFC	10/06/2008
Consolidated Edison Company	NPCC	12/9/2008

These readiness evaluations resulted in 3,585 recommendations that have been, or currently are being, implemented by the evaluated entities. Figures 2 and 3 below summarize the status of all recommendations tracked over the course of the program.



Figure 2: Recommendations Tracking Status

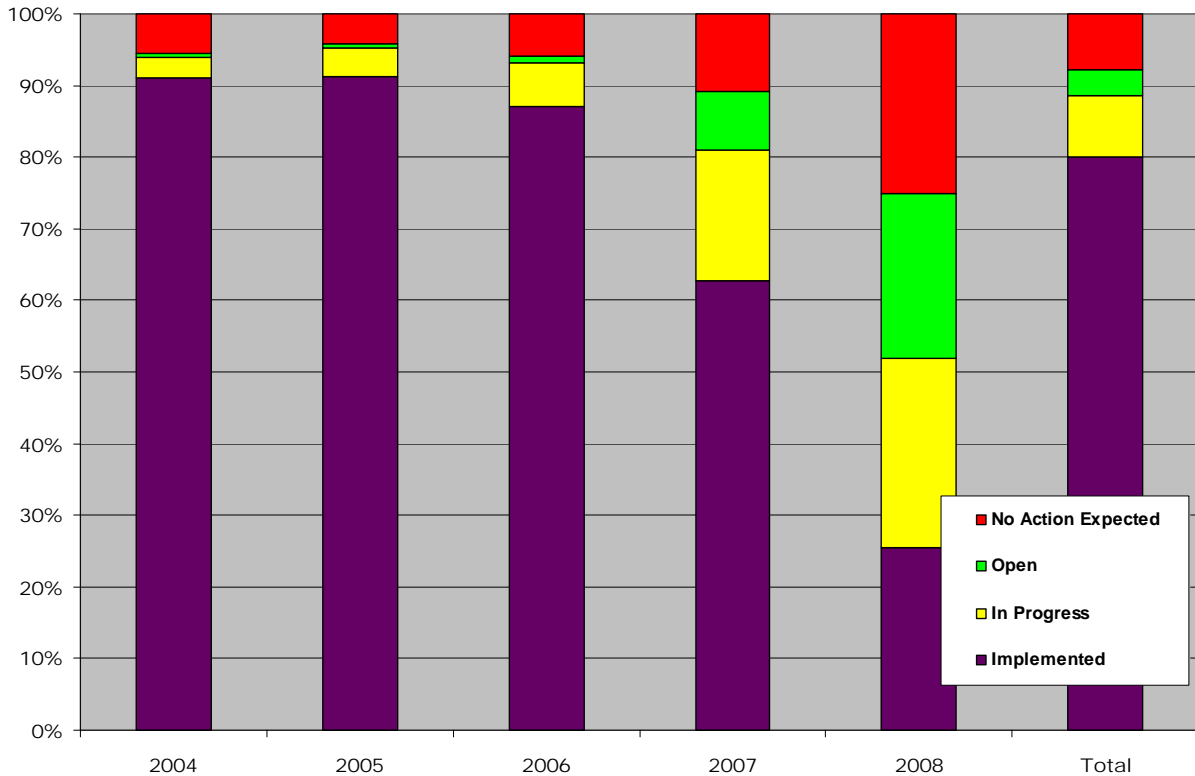


The recommendations are not mandatory. However, entities have either implemented or started work on 88 percent (79 percent implemented and 9 percent in progress) of 3,585 recommendations through December 2008.

As of the end of 2008, over 650 industry volunteers had participated in evaluations to fill approximately 1,600 positions. Of these volunteers, about 240 participated in multiple evaluations.

NERC has continued the program with provisionally certified RCs, BAs, and/or TOPs that have not been through readiness evaluations since the 2003 blackout. By the end of March 2009, all provisionally certified RCs, BAs, and/or TOPs had completed at least one readiness evaluation.

Figure 3: Annual Recommendations Tracking Status



Prior to enforceable and mandatory NERC standards, the goal of the Reliability Readiness Evaluation Program was to increase transparency on operating practices and assess the industry's overall preparedness to minimize the likelihood of another major blackout. By leveraging publicly posted and balanced reports, NERC encouraged adoption of examples of excellence, identified industry trends, and became a proactive force in encouraging continent-wide reliability practices. The program served as one of the many driving factors aimed at increasing the reliability of the bulk power system. Review of the history of the Reliability Readiness Evaluation Program shows the program was one of NERC's strongest responses to the August 2003 Northeast blackout and served an important purpose while it was being conducted, particularly prior to the implementation of mandatory and enforceable reliability standards pursuant to Section 215 of the FPA.

**2. NERC shall utilize the results of reliability readiness evaluations to identify and promote examples of excellence to owners, operators and users of the bulk power system.**

Examples of excellence are practices NERC has identified as being exceptionally effective in ensuring and protecting the reliability of the interconnected bulk power system. NERC has highlighted these practices as examples for the electric industry to use in achieving excellence in system operations. While these examples are not intended to serve as requirements or standards, NERC has recommended organizations review and consider them where appropriate for their own operations.

Examples of excellence have been derived from the information and insight NERC has gained from its Reliability Readiness Evaluation Program. Readiness evaluation teams independently reviewed the operations of reliability entities and not only made recommendations for improvement, but also identified practices that could serve as examples of excellence for the industry. Team leaders and members of the Operating Reliability Subcommittee (a subcommittee of the NERC Operating Committee) then jointly reviewed newly discovered findings and carefully considered each practice. Practices determined to be notable, effective, and feasible became examples of excellence and were described in a one- to two-page description posted on NERC's Website.

Not every example of excellence identified will be appropriate for every organization and in every circumstance. But more widespread implementation of these practices was intended to help sustain and continuously improve interconnected-network reliability. Each organization makes its own decisions on whether or not to implement an example of excellence.

To increase exposure, NERC moved from using a quarterly examples of excellence bulletin to announcing examples in the widely-read monthly NERC News. NERC also sponsored a Webinar to share examples of excellence focusing on the important issue of attracting and retaining talent in the electric industry. As stated in NERC's *2007 Long-Term Reliability Assessment*, "The loss of industry workers and their years of accumulated expertise due to retirements is a serious threat to bulk power system reliability, exacerbated by the lack of new recruits entering the field." Representatives from Wisconsin Electric Corporation, the Tennessee Valley Authority, and Western Area Power Administration-Upper Great Plains Region presented practices they use effectively to address workforce planning, recruitment, development, and relations.

By December 2008, over 100 examples of excellence had been identified and posted to NERC's Website. These examples covered a wide range of operational areas, including culture, reliability tools, system restoration, and vegetation management.

**D. Training, Education, and Operator Certification Program**

**1. NERC shall establish and implement a program for issuing certification credentials to, and maintenance of, the certification credentials by, operating personnel of owners, operators and users of the bulk power system.**

In 1998, NERC established a program to address system operator minimum required knowledge based on a formal job analysis of system operator activities. A certificate is awarded to those individuals who demonstrate the required knowledge related to NERC standards and the basic principles of bulk power system operations by passing an examination in one of four functional areas: Transmission Operator, Balancing and Interchange Operator, Balancing/Interchange and Transmission Operator, and Reliability Coordinator. The program contracts with a federally-recognized psychometric consultant to provide advice on all matters of exam development. The exams are designed to measure the candidate's knowledge concerning

job tasks identified (in job-analysis surveys by persons working as system operators) as being important to their job.

The NERC ROP covering operator certification and the System Operator Certification Program Manual have been crafted from certification criteria endorsed by the National Organization for Competency Assurance (NOCA). The NERC Personnel Certification Governance Committee (PCGC) is responsible for governing the program. The program charter requires at least one Canadian representative to serve on the PCGC. The PCGC is composed of system operators or those who are directly involved with operators. All members of the PCGC must have a valid NERC certification. The PCGC makes every attempt to have each specialty represented. The PCGC seeks input and assistance from other NERC and industry groups for proposed changes and initiatives, and the PCGC is the final decision-making body for the certification program.

The program has an open policy towards its examinations in that there are no prerequisites. Anyone and everyone may pay the fee and take the exam without regard to factors such as age, gender, religion, national origin, or disability. A statement to this effect is in all announcements of the program. NERC maintains multiple exams for each credential to ensure fair results. To maintain examination form equivalence, Applied Measurement Professionals (AMP) is contracted to work with the Examination Working Group (EWG) to ensure that each form of a credential's exam is weighted such that no person taking any of the different forms will be penalized. Each form assesses the equivalent level of knowledge and skill of system operators. Efforts are made by AMP and the EWG to minimize the scoring differences between exam forms to an insignificant level. AMP also compares the cut score on each exam with the actual performance of the exam as another form of validation. This is a continuous process to ensure that the program accounts for any variables or anomalies. The program develops exams that are translated for the operators in Québec.

NERC has a contract with Prometric (formerly Sylvan Learning Centers) to administer the computer-based examinations throughout North America (except Mexico). The convenience of Prometric's numerous test centers, and the level of security employed at the test centers, are very high.

A credential is maintained in one of two ways: earning the necessary amount of qualified continuing education hours in a three-year period, or retesting when the credential is close to expiring. The retesting option is being phased out and will no longer be available after October 1, 2009.

The program budget is included in the annual NERC Business Plan and Budget. However, it is completely funded through user fees. NERC acts as a contracted administrator for the program. In addition, the Certification Program is operated and funded separately from NERC's Continuing Education Program and the Education Program. The Certification Program shares a database with the Continuing Education Program, with each program sharing the cost of operating and updating the database. The NERC Continuing Education Program uses the criteria established by the PCGC as the baseline to judge the quality of a learning activity. The

Continuing Education Program is not dependent on the certification Program as the continuing education Program focuses on improving skills, not testing current knowledge.

Since the inception of the Certification Program in 1998, over 12,000 credentials have been issued. As of May 31, 2009, there are over 5,870 active system operator credentials. As seen in the chart below, since 1998 the average passing rate is 79 percent with some variations from year to year. This passing rate is within the standard-accepted normal range in the testing industry. Most of the variations have been due to the level of experience of the people taking the exam. In recent years, as experienced operators have increased the use of continuing education hours to renew their credentials, new operators with less knowledge have comprised an increasing percentage of test-takers, resulting in lower passing rates that are still within acceptable testing industry bounds.

<b>NERC System Operator Examination Statistics</b>				
<b>Year</b>	<b>Number of Exams Taken</b>	<b>Number Passed</b>	<b>Number Failed</b>	<b>Percent Pass</b>
1998	997	920	77	92
1999	1620	1420	200	88
2000	1422	1089	333	76
2001	777	593	184	76
2002	993	760	233	77
2003	1868	1555	313	83
2004	1690	1412	278	84
2005	2170	1731	439	80
2006	1262	943	319	75
2007	1030	729	301	71
2008	1059	693	366	65
2009 thru 5/31	441	288	153	65
<b>Totals</b>	<b>15329</b>	<b>12133</b>	<b>3196</b>	<b>79%</b>

The most significant change to the program in the past three years was the change from retesting to maintain certification to the use of continuing education hours to maintain a credential. After two years of preparation, the three-year transition to the exclusive use of continuing education hours began in October 2006. The use of continuing education hours has had the result of expanding the training and education available to system operators to improve their knowledge and skills. This is addressed in more depth below in the discussion of the continuing education program.

As seen in the table below, the use of continuing education hours to maintain a credential has increased dramatically since first implemented in 2006. The database is not yet capable of determining the annual number of operators who are required to maintain or renew their credential within a given year, so the table below is limited to those who used continuing education hours for renewal. The smaller number of experienced operators taking the exam to maintain their credential contributed to the lower passing rate for the exam for 2008 into 2009 compared to previous years.

<b>Use of Continuing Education Hours for Credential Maintenance</b>	
<b>Year</b>	<b>Credentials Maintained</b>
2006	35
2007	109
2008	833
2009 thru 5/31	379
Total	1356

In 2007 the program implemented a new System Operator Certification and Continuing Education Database (SOCCED) in conjunction with the continuing education program to allow input and tracking of an individual's credential maintenance. The SOCCED allows operators to register for the exam and track the status of the activities needed to renew their credential.

The program conducts a job analysis for system operators at least once every five years. NERC last conducted a job analysis in 2006 and is preparing to conduct another in 2009 to capture the recent changes in system operations attributed to enforceable standards.

New exams have been released twice in the past three years: in January 2006 and July 2008. Two exams are developed and released for each of the four credentials, each exam requiring a large amount of effort from volunteers, NERC staff, and contractors.

With almost 12,000 credentials awarded in the ten years of the Personnel Certification Program, there is a positive impact on the industry with this demonstrated knowledge. The overall passing rate of 79 percent shows the credential is not just another simple step to becoming an effective operator; real knowledge is required. This knowledge is defined by certified operators who participate in the job analysis, write exam items, and construct the exams. This is a practice of true certification programs. Preparing for the exam and maintaining the credential through the use of continuing education has improved the knowledge base of system operators. This is vitally important as the workforce loses its most experienced operators and new operators take their place.

Comparison of the content of the current exams to the initial exams in 1998 reflects an increasing sophistication within the operator population. It is the operators who write the questions for the exams. Early questions focused on memorizing the content of the NERC Operating Policies. Today there is a greater emphasis on situational problem solving and analysis with much less memorization of reliability standards. This shift is attributable to the improved knowledge from the increased training and education operators receive today compared to ten years ago.

The Personnel Certification Program follows NOCA accreditation criteria to maintain independence. Decisions made for the program by the PCGC are meant to protect the integrity of the credential and the program. The PCGC seeks input from affected industry sectors when deciding on changes to the program. However, official accreditation has not been sought for the program since the cost of achieving and maintaining accreditation was not perceived to benefit the program or operators.

2. **NERC shall monitor, review, and revise the components and topics of its operator certification, continuing education, and training programs on an ongoing basis to ensure the components and topics are timely and reflect matters of current importance to the reliable operation of the bulk power system.**

The NERC System Operator Certification Program conducts a job analysis at least once every five years. NERC last conducted a job analysis in 2006 and is preparing to conduct another in 2009 (i.e., two-and-a-half years after the last analysis) to capture the recent changes in system operations attributed to enforceable standards. The job analysis determines the content outline for each of the four credentials. The content outline for each of the four credentials accurately reflects the tasks performed by system operators performing that function. A PCGC subgroup working with AMP recently created a survey instrument that will be used in the mid-2009 job analysis. The results of this analysis will be a content outline for each of the four job functions. The content outlines form the basis for each exam.

The NERC Examination Working Group (EWG) introduces new examinations every 18 months to keep items from becoming too well known and to address changing industry operations, while still focusing on the content outline. New examinations were released in January 2006 and July 2008. The July 2008 release was originally scheduled for July 2007. The delay was due to a breach of exam development security protocol, possibly exposing an exam to the world. The PCGC stopped development of that nearly completed exam and instructed the EWG to begin development of a new exam. The use of the exams for an extra year was not a problem since all items on the exam were current and performing well with the test-takers.

No real changes or improvements have been required to the monitoring and review processes since 2006. The response to the possible exam security development breach demonstrates that the procedures the PCGC has in place work well.

Monitoring, reviewing, and revising the basis for the operator certification exams is a routine activity that is fundamental to the success of the program. It is performed to keep the exam items timely. Performing the job analysis one-and-a-half years early in 2009 is designed to capture the changes in operations that have occurred since NERC became the ERO. It also includes the additional entities that are now required to have certified operators on shift. This type of response has become expected of the certification program to maintain the integrity of the credentials. The practices used to maintain the integrity of the credentials and keep the examination content current have been adopted from the testing and certification industry. These have proven quite successful. The NERC ROP and the Certification Program Manual have been written using these principles. Putting them into action is labor intensive but protects the integrity of the program. No changes are foreseen for the program in this area.

3. **NERC shall establish and implement education programs for NERC and Regional Entity staff and for personnel of owners, operators, and users of the bulk power system, including learning materials and training activities.**

The NERC Training and Education Program strongly differentiates between training and education. Education is the dissemination of information to increase a person's knowledge and

can be delivered through documents, coursework, or workshops. The mediums can be a formal classroom setting, electronic, or via the Internet. Training is performed to improve a person's skills and performance and likely includes some form of education, but applies this knowledge into higher level uses so a person can successfully perform a job task.

The NERC ROP define a large audience for the education program with an emphasis on system operations personnel, but also includes other industry personnel, Regional Entity staff, regulators, and NERC staff. NERC delivers educational materials to the industry and provides training to NERC and Regional Entity staff.

The program provides educational materials to the industry as resources allow. Industry education has been limited but includes workshops and Webinars. Educational materials are developed from the NERC perspective. They form the basis for others to use and incorporate into more detailed education and training activities. Generally, however, NERC has not provided training to the industry. Skill requirements differ throughout the industry even within similar jobs. There are a number of excellent vendors that provide these services and NERC has not wanted to compete with them.

NERC has the primary responsibility for providing training for NERC internal staff, NERC and Regional Entity compliance auditors (including CIP auditing), NERC and Regional Entity compliance investigators, and NERC Standards Program staff. It is this audience on which NERC focuses its limited training and education resources.

Since 2006 NERC has provided many educational activities to improve the knowledge of industry personnel and training activities to improve NERC and Regional Entity staff performance. Listed below are the training activities presented since 2006.

- NERC and Regional Entity Compliance Auditor Training — NERC conducted a job task analysis in early 2007 for NERC and Regional Entity compliance auditors. The job task analysis determined the tasks for lead auditors and audit team members. NERC will conduct another compliance auditor job task analysis in the fall of 2009 to determine how the role has changed, and what additional training needs to be developed in order to help auditors improve their job performance. The curriculum NERC currently maintains for compliance lead auditors is listed below. All compliance auditors must complete this training before they participate in their first compliance audit. This curriculum was developed through the use of a job task analysis to identify auditor skills.
- Fundamentals of NERC Compliance Audits for Lead Auditors — An instructor-led compliance auditing fundamentals course is delivered quarterly to compliance auditor team leaders. It is required for all team leaders before they can lead an audit team. This course includes lead auditor tools, interview techniques, correct protocols, processes, evidence gathering techniques, and other necessary skills. The course is facilitated by NERC subject-matter experts. As of May 31, 2009 over 148 NERC, Regional Entity, and Commission personnel have attended this course.



- Fundamentals of NERC Compliance Audits for Audit Team Members — An online compliance auditing fundamentals course is available on demand (24/7) for compliance audit team members. It is required for all team participants before they perform as part of an audit team. This course is similar to the instructor-led compliance auditing fundamentals course. It is not as intensive as the instructor-led course because it does not include all of the instruction and tools for the lead auditors. It includes interview techniques, correct protocols, processes, techniques for gathering evidence, and other necessary skills. As of May 31, 2009 over 299 industry participants have taken this online course.
- Gathering Quality Evidence — An online Gathering Quality Evidence module for audit team leaders and audit team members launched in April 2008. This training module is required before anyone may participate on a compliance audit. This module is in addition to the compliance audit fundamentals online modules. This module is available on demand (24/7). As of May 31, 2009, 309 NERC, Regional Entity, and Commission personnel have taken this online course.
- Gathering Quality Evidence WebEx (optional) — WebEx module created to answer frequently asked questions that compliance audit team members have after completing the online Gathering Quality Evidence module. This WebEx is held when there are a minimum of 10 people requesting it and is optional. As of May 31, 2009, 30 NERC and Regional Entity personnel have attended this WebEx.
- Tracking Users in Design a Course — An online module “Tracking Users in DAC” was developed for NERC and Regional Entity staff. This module instructs lead auditors and compliance staff on how to track in NERC’s Learning Management System if their audit team members have completed the necessary online training modules. There is also an instructor-led version of this course. As of May 31, 2009, 16 NERC and Regional Entity personnel have either attended the instructor-led course or taken the online course.
- NERC CIP Standards Training — An instructor-led course for the NERC CIP Standards for compliance audit team leaders. This two-day course covers the basic concepts and topics that are the focus of the CIP standards with which some registered entities must be auditably compliant as of July 1, 2009. As of May 31, 2009, 92 NERC and Regional Entity staff have attended this course.
- CVI Training — An instructor-led CVI course for NERC and Regional Entity investigation and compliance staff was launched on January 28, 2009. This one-day course focuses on the NERC CVI process, investigation methodology, and the use of NERC tools and techniques for investigating violations. The class includes a break-out exercise that simulates conducting a CVI on a small system event. The class was rolled out to the Regional Entities on June 9, 2009. As of May 31, 2009, 8 NERC compliance investigators and 18 Regional Entity staff attended this course. In addition, many WebEx’s have been conducted for Regional Entities to support CVIs and CIQs.

- **Creating Compliance Elements for NERC Reliability Standards** — An online course on how to develop compliance elements for reliability standards (partnering with the Standards Program) for compliance element development resource pool volunteers. This module is available on demand (24/7). As of May 31, 2009, 16 NERC and Regional Entity personnel have taken this course. In late 2009 NERC will perform a job task analysis for members of the standards drafting teams. The job task analysis will be used to develop training for the standards drafting team members and team leaders.
- **The Fundamentals of NERC Readiness Evaluations** — This course is an online readiness fundamentals course for readiness evaluators on the NERC evaluation process, interview techniques, observation techniques, and other necessary skills. This course is available on demand (24/7). Approximately 210 readiness evaluators have completed this course. This course is no longer available as the Readiness Program has closed.
- **Continuing Education Providers** — NERC also provides training for continuing education providers who use the System Operator Certification and Continuing Education Database. It is delivered via WebEx to answer the providers' questions as they learn about the use of the SOCCED. Over 250 people have received this training online via WebEx since 2007.

In late 2006 into 2007 a total of ten one-and-a-half day workshops addressing the content of the new CIP standards were held across North America. Approximately 870 people attended. Materials from the workshop are still available for download and are being used by the industry to prepare for mandatory compliance in July 2009. Participants reacted very favorably to the workshops. These workshops also provided a platform for NERC to encourage entities to use expert consultants to bring their programs into compliance.

In 2008 NERC began hosting Webinars for the industry to educate industry participants on NERC topics and pressing industry issues. In 2008, 11 Webinars were held drawing over 4,000 industry participants. The series of Webinars was developed with the NERC Communications Department. The Webinars and slides are available to industry participants. The topics presented in 2008 were: NERC 101; Wind Integration and Transmission; Reliability Basics; NERC 102: Compliance and Enforcement Process; Lessons Learned from Event Analysis; NERC 102: Standards Process; Aging Workforce; Examples of Excellence: Retaining and Training Employees; Special Report: Industry Concerns on the Reliability Impacts of Climate Change Initiatives Briefing; Winter Reliability Assessment Briefing; and Alerts Distribution (Reporting and FAQs). This successful Webinar series is continuing in 2009. As of June 30, 2009, nine more Webinars were hosted for the industry; approximately 3,600 participants attended. The topics were: Alerts Distribution (Reporting and FAQs); Demand Response; NERC 101; Project 2007-11: Disturbance Monitoring Draft Standard; Accommodating High Levels of Variable Generation into the Bulk Power System; Generator Frequency Response; Under-frequency Load Shedding — PRC-006-1 Standards Development; 2009 Summer Reliability Assessment; and Modifications to Reliability Standards TPL-001— TPL-004: Transmission System Planning Performance.

Five job aids regarding Compliance Monitoring Enforcement Program Timelines were developed for the electric industry in 2008. These are available for download from the NERC Website. Comments from users have been very favorable.

The last year NERC hosted a Train-the-Trainer workshop for those who train system operators was 2006. Approximately 45 people attended. Since this workshop was duplicating courses offered by training vendors, NERC stopped delivering this course. Several entities complained about the need to pay more for vendors, but overall entities have adapted well and training organizations have filled the need to offer this specialized training.

NERC encourages expert vendors in the industry to assist industry participants with their needs. There are also other resources available to the industry such as workshops offered by other NERC departments and the Regional Entities, and forums for industry participants.

In 2008 the Training and Education Program also commissioned a consultant to review and recommend options for delivering education and training online when appropriate. The recommendations note that NERC's migration to a Microsoft Sharepoint platform is ideal for developing and delivering future learning activities online. The program intends to take advantage of this platform for future activity development.

NERC has those participating in each course, including online courses, complete evaluations at the end. Courses are then modified based on the comments and potential improvement. Modifications are made to the courses or materials almost immediately. Because these tend to be incremental, activities are constantly evolving and improving. The program also performs job-task analyses to determine areas for further training development and to target modifications and improvements.

The Training and Education Program focused on training NERC and Regional Entity personnel as the main priority when NERC became the ERO. Compliance personnel have been the main audience as their enforcement duties were new and carried high expectations. The Training and Education Program wanted to focus on qualifying personnel performing the authorized work of the ERO first, then provide the industry with the knowledge it sought from the NERC perspective. With many expert consultants available to provide training and guidance on many operating and planning topics, the program did not want to duplicate or compete with what the market had to offer.

The biggest challenge to training Regional Entity compliance personnel has been delivering a single direction so audits are conducted uniformly throughout North America. Participant surveys note the program has been successful in delivering that message in the classroom setting. No follow-up surveys have been performed to determine if participants are using this knowledge in audits.

To date, creating education materials for industry participants has not been a priority for the NERC Training and Education staff, due to resource limitations. Limited industry education has been developed and delivered based on needs, priorities, and available resources. Those that are developed focus on delivering the NERC perspective and were discussed previously. The

Webinars have been a large success, reaching many interested industry participants. However, going forward, in light of stakeholder demand, training and education programs and materials will be developed for industry participants on NERC reliability standards and compliance with standards.

NERC is also working with the standing committees to develop ways of sharing information among industry stakeholders. The Reliability Fundamentals Working Group of the Operating Committee is charged with using an “open source” concept to deliver and modify information relevant to the industry. NERC is working to provide the platform to accomplish and manage this charge in 2010. The result will be more timely and useful information on many topics.

- 4. NERC shall establish and implement a program to promote quality and foster improvement in continuing education and training programs offered by owners, operators and users of the bulk power system to their operating personnel, including developing and maintaining a process to approve continuing education and training providers by establishing requirements for, and conducting periodic audits of, such providers and activities.**

In October 2003, the NERC board approved the Continuing Education program. The Personnel Subcommittee (PS) designed the Continuing Education program based on the International Association for Continuing Education and Training (IACET) criteria and guidelines by which hundreds of organizations measure their educational offerings. IACET’s criteria and guidelines address the processes for the design, development, and delivery of continuing education and training. The PS used industry comments to help develop the program. Initially system operators could earn continuing education hours, but not yet use those hours to maintain their system operator certification credentials. The NERC board sought validation of the program’s ability to delivery quality training before approving its use in maintaining system operators’ credentials.

The PS is the stakeholder governing body for the program and sets the standards, criteria, and fees associated with the program. The program is 100 percent funded by user fees with no industry assessments needed.

The Continuing Education Program has processes and procedures to review and approve all continuing education activities. An independent panel of industry trainers assists NERC in the review of each activity submitted. Upon the completion of each review, NERC either approves or denies the provider’s application. There are over 12,000 activities that have been approved through the program with over 6,000 of those still active.

The Continuing Education Program has helped promote the growth of system operator training in North America. Since 2003 when continuing education activities were first approved, the industry has gone from providing a handful of training activities to over 6,000 offered for system operators in 2009. This dramatic increase can only result in increased knowledge and skills of system operators, which ultimately increases the reliability of the bulk power system. In 2006 about 152,000 hours of continuing education were earned by system operators, growing to

280,000 hours in 2007 and up to 399,000 hours in 2008. As of May 31, 2009, over 162,000 hours of continuing education were earned by over 4,600 individuals.

- Over 220 entities are now approved to deliver continuing education activities.
- About 1,000 unique activities are delivered quarterly.
- Training providers are reporting between 50,000 to 75,000 continuing education hours awarded each quarter. There have been over 980,000 continuing education hours earned by certified system operators since April 1, 2006.

Changes to this program are continual and ongoing. The Continuing Education Program has processes and procedures to randomly audit continuing education courses to ensure providers are delivering what they submit on their applications. The program met its goal to audit 150 activities in 2008 with plans to audit more in 2009.

Since May 2007, continuing education providers maintain an account and course listing in the System Operator Certification and Continuing Education Database (SOCCED). Training providers are required to apply for approval of all continuing education activities they intend to deliver to system operators. In December 2008 the PS completed minor updates to the program manual clarifying what is expected to be approved in various activities .

In 2009, with additional tracking capabilities in the SOCCED, NERC will be able to follow trends in the frequency and type of training that is being delivered to system personnel. This will tie into metrics of how the aging workforce issue is affecting the industry.

The PS has begun work on determining how to voluntarily accredit training programs in order to raise the bar in training quality beyond the requirements found in PER-005 and within the Continuing Education Program. A plan is expected to be presented to the NERC board in 2010.

The Continuing Education Program is aligned to meet the needs of the Certification Program's continuing education requirements. Since 2006, the Continuing Education Program has dramatically increased the amount of training a certified system operator receives. This training, targeted to improve skills and performance, improves the level of reliability of the bulk power system. The PS and the PCGC meet annually to ensure the continuing education program will continue to improve on the quality of training being delivered to system personnel.

The certification program has met the defined needs of system operators and will seek to expand its usage among other professions in the industry. It will continue to address the quality of the activities that are acceptable to maintain a credential to honor the high integrity of the program and credential. The continuing education program has fulfilled its requirements and is moving forward to expand the reach of its positive impact on reliability. The program has continuously clarified its requirements to meet the needs of training providers and meet the needs of the certification program. Going forward NERC will play a large role in developing voluntary training program accreditation criteria that will focus on the overall quality of a training program. Evaluated items that go beyond current NERC standards and training programs are

performance of an operator, training program model, training effectiveness, and advanced training.

**E. Reliability Assessment and Performance Analysis Program**

**1. NERC shall conduct periodic assessments of the reliability and adequacy of the bulk power system in North America and disseminate such assessments to the FERC, other governmental authorities, the electric utility industry, and the public, in accordance with §215(g) of the Federal Power Act and 18 C.F.R. §39.11.**

Section 800 of NERC's ROP governs NERC's obligations to independently and comprehensively assess and report on the reliability and adequacy of the North America bulk power system. NERC prepares three reliability assessment reports each year: (1) a long-term reliability assessment (LTRA) report, (2) an annual seasonal (summer) report and (3) an annual seasonal (winter) report. These reports assess electricity demand and the adequacy of supply throughout the North America bulk power system.

Beginning with NERC's *2006 Long-Term Reliability Assessment*, NERC identified key findings and specific actions needed to be taken by bulk power system users, owners, and operators, governmental agencies and NERC itself to improve the reliability of the bulk power system. The actions identified do not represent mandatory requirements, but rather NERC's independent judgment of those steps that will help improve the reliability and adequacy of the North American bulk power systems. In its *2007 Long-Term Reliability Assessment* and reports for subsequent periods, NERC reported on the progress being made in achieving each of the actions identified in prior assessment reports.

Commencing in 2008, and continuing into 2009, NERC's Reliability Assessment and Performance Analysis Program is responsible for implementing the Reliability Assessment Improvement Plan, approved by the NERC Planning Committee (PC) in March 2008 to enhance NERC's seasonal (summer/winter) and LTRAs. The final report, which was approved by NERC's PC in September 2008, can be found at <http://www.nerc.com/files/Reliability%20Improvement%20Report%20RAITF%20100208.pdf>. This plan creates a platform from which NERC, in concert with Regional Entities and industry volunteers, can address reliability considerations and increase the level of independence, granularity, transparency, and comprehensiveness of its reliability assessments, including:

- Emerging Issues risk assessment and development of Scenarios for assessment
- Risk Assessment and probability analysis for the LTRA
- Additional and improved metrics for the LTRA
- Development and maintenance of a NERC-wide reliability assessment handbook
- Addition of on-peak and off-peak transmission and capacity reliability assessment
- Risk and Probabilistic analysis to support reliability assessment
- Generation/fuel interdependency

Additionally, NERC's efforts to improve both its seasonal (summer/winter) and long-term reliability assessments consider the following areas of assessment:

- In-depth evaluation and risk assessment of industry emerging issues
- Scenario analysis, such as renewable portfolio standards, climate change initiatives, etc.
- Review of international best practices
- Open workshops to discuss emerging issues and review LTRA data collection and self-assessments
- Evaluate load forecasting techniques and develop improved bandwidth calculations
- Measure load-diversity changes and impacts on reliability and adequacy.

The following Seasonal and Long-Term Reliability Assessments were completed between July, 2006 and May 2009:

- Long Term Reliability Assessments
  - <http://www.nerc.com/files/LTRA2006.pdf> and addendum
  - [http://www.nerc.com/fileUploads/File/Assessments/LTRA2006\\_Planne d Transmission Table Update.pdf](http://www.nerc.com/fileUploads/File/Assessments/LTRA2006_Planne_d_Transmission_Table_Update.pdf), published October 2006
  - <http://www.nerc.com/files/LTRA2007.pdf>, published October 2007
  - <http://www.nerc.com/files/LTRA2008.pdf>, published October 2008
- Summer Reliability Assessments
  - <http://www.nerc.com/files/summer2006.pdf> published May 2006
  - <http://www.nerc.com/files/summer2007.pdf> published May 2007
  - <http://www.nerc.com/files/summer2008.pdf> published May 2008
  - <http://www.nerc.com/files/summer2009.pdf> published May 2009
- Winter Reliability Assessments
  - <http://www.nerc.com/files/winter2006-07.pdf> published November 2006
  - <http://www.nerc.com/files/winter2007-08.pdf> published November 2007
  - <http://www.nerc.com/files/winter2008-09.pdf> published November 2008

As part of the process for the NERC LTRAs, the NERC Reliability Assessment Subcommittee (RAS) relies on input from the NERC Load Forecast Working Group (LFWG), which is responsible for assessing uncertainty inherent in the forecasts provided to the Regional Entities by their member systems. For this purpose, LFWG develops uncertainty bandwidths around aggregated Regional, United States, and Canadian annual forecasts of peak demand and energy. Each LTRA discusses the method and resulting bandwidths around the ten-year Regional forecasts as well as how the assessment results would vary if peak demands exceeded base forecasts. Load forecast bandwidth calculations were completed and incorporated into NERC's annual 2006 through 2008 LTRAs. The specifics of this analysis are documented in the following reports:

- [http://www.nerc.com/docs/docs/pubs/NERC\\_2006-2015\\_Regional\\_Bandwidth\\_Report.pdf](http://www.nerc.com/docs/docs/pubs/NERC_2006-2015_Regional_Bandwidth_Report.pdf)
- [http://www.nerc.com/docs/docs/pubs/NERC\\_2007-2016\\_Regional\\_Bandwidth\\_Report\\_080107.pdf](http://www.nerc.com/docs/docs/pubs/NERC_2007-2016_Regional_Bandwidth_Report_080107.pdf)
- [http://www.nerc.com/docs/pc/lfwg/NERC\\_2008-2017\\_Regional\\_Bandwidths.pdf](http://www.nerc.com/docs/pc/lfwg/NERC_2008-2017_Regional_Bandwidths.pdf)

Calculation of bandwidths of certainty based on historical projections and forecast demand improves NERC's ability to measure overall bulk power system reliability. NERC evaluated load forecasting techniques used throughout the NERC Regions and developed enhancements (see *Load Forecasting Survey and Recommendations*, December 2007 at [http://www.nerc.com/docs/pc/lfwg/NERC\\_Load\\_Forecasting\\_Survey\\_LFWG\\_Report\\_111907.pdf](http://www.nerc.com/docs/pc/lfwg/NERC_Load_Forecasting_Survey_LFWG_Report_111907.pdf)). Further, NERC evaluated how to improve the accuracy of bandwidth calculations and documented the results in its report, entitled *Method for NERC's 2008-2017 Regional and National Peak Demand and Energy Projection Bandwidths* ([http://www.nerc.com/docs/pc/lfwg/Method\\_for\\_2008-2017\\_Bandwidths.pdf](http://www.nerc.com/docs/pc/lfwg/Method_for_2008-2017_Bandwidths.pdf)).

In addition, in 2008, NERC requested a Special Reliability Assessment to measure the impacts of significant supply-side changes from the 2008 LTRA reference case. For this *Scenario Case*, the Regions were asked to assess accommodating a minimum of an additional 15 percent of total energy from new renewable resources, above the *Reference Case* values, with no more than 5 percent made up from energy efficiency, or to propose a another *Scenario Case* that significantly impacts supply mix, electricity purchases, or sales in the studied region. The base year for calculating the energy was set as 2008 to provide a common reference value. The results of this scenario assessment will be completed in 2009 (see [http://www.nerc.com/docs/pc/ras/Scenario\\_Letter\\_122308.pdf](http://www.nerc.com/docs/pc/ras/Scenario_Letter_122308.pdf) for more background).

NERC also prepared special reliability assessment reports on Regional, Interregional, or interconnection bases as conditions warrant or as requested by its board. The following Special Assessments/Reports and Survey of Reliability Issues were completed:

- Results from the *2007 Survey of Reliability Issues*, published October 26, 2007: ([http://www.nerc.com/files/Reliability\\_Issue\\_Survey\\_Final\\_Report\\_Rev.1.pdf](http://www.nerc.com/files/Reliability_Issue_Survey_Final_Report_Rev.1.pdf)).
- *2008-2017 Impact on Capacity Margins from Retrofit of Once-Through Cooling Systems at Existing Generating Facilities*, published October 2008 ([http://www.nerc.com/files/NERC\\_SRA-Retrofit\\_of\\_Once-Through\\_Generation\\_090908.pdf](http://www.nerc.com/files/NERC_SRA-Retrofit_of_Once-Through_Generation_090908.pdf)).
- *Electric Industry Concerns on the Reliability Impacts of Climate Change Initiatives*, published November 12, 2008 (<http://www.nerc.com/files/2008-Climate-Initiatives-Report.pdf>).



- *Accommodating High Levels of Variable Generation*, published April 16, 2009: [http://www.nerc.com/files/VGTF\\_Report\\_041609.pdf](http://www.nerc.com/files/VGTF_Report_041609.pdf)

In 2009, NERC began an assessment of Reliability Impacts of Climate Change Initiatives (<http://www.nerc.com/filez/riccitf.html>). A two-phase approach is being developed to first provide the current status of technical reliability considerations (Phase I), followed by more detailed scenario assessment (Phase II). Completion is targeted for July and December 2009, respectively.

NERC has sponsored/co-sponsored a number of workshops exploring key emerging issues, and supported the development of industry forums to support industry action:

- With the National Science Foundation (NSF), Power System Engineering Research Center (PSERC), and Institute of Electrical and Electronic Engineers Power & Energy Society (IEEE-PES), NERC cosponsored the *Aging Workforce Workshop* in November 2007 (see report at [http://www.ieee.org/portal/cms\\_docs\\_pes/pes/subpages/pescareers-folder/workforce/2008-7-8-NSF\\_Workforce\\_Workshop\\_Report.pdf](http://www.ieee.org/portal/cms_docs_pes/pes/subpages/pescareers-folder/workforce/2008-7-8-NSF_Workforce_Workshop_Report.pdf)). As a result of this workshop, an industry-wide collaborative supported by the IEEE-PES has been formed to address industry workforce issues and provide a platform for industry action (<http://www.ieee-pes.org/workforce/workforce-collaborative>)
- Joining with the Electric Power Research Institute (EPRI) and the Power System Engineering Research Center (PSERC), NERC supported the *Technical Summit: Extreme Weather Impacts on Reliability*, held in October, 2008 (see [http://www.pserc.org/docsa/Reliability\\_Summit.pdf](http://www.pserc.org/docsa/Reliability_Summit.pdf)). The goal was to identify any reliability issues and support development of collaborative research and development to address bulk power system reliability concerns resulting from extreme weather. A final report documenting the results of this workshop identifying next steps is under preparation.

As variable resources (such as wind and solar plants) are projected to increase, NERC has initiated the Integration of Variable Generation Task Force concentrating on the reliable integration of large amounts of these resources (see <http://www.nerc.com/filez/ivgtf.html>). The final report from this task force was approved by NERC's OC and PC in February 2009. Recommendations are being evaluated to address the impacts on bulk power system planning and operations, evaluation of any gaps in NERC standards, and a work plan developed for NERC and the industry.

Finally, NERC developed its first version of the *Reliability Assessments Guidebook* to provide guidance on what the industry should do regarding data submissions to support NERC's requirement for more consistent reliability assessments. This document has undergone review by the PC and it has been posted as a committee guideline ([http://www.nerc.com/docs/pc/ragtf/Reliability\\_Assessment\\_%20Guidebook%20v1.2%20031909.pdf](http://www.nerc.com/docs/pc/ragtf/Reliability_Assessment_%20Guidebook%20v1.2%20031909.pdf)).

As demand-side management (DSM) becomes increasingly deployed by industry to meet resource obligations, NERC initiated the development of a categorization taxonomy along with recommendations on data collection for both DSM projections supporting NERC's seasonal and LTRAs, and data collection of demand response events (see NERC's report *Data Collection for Demand-Side Management for Quantifying its Influence on Reliability*) ([http://www.nerc.com/docs/pc/drdrtf/NERC\\_DSMTF\\_Report\\_040308.pdf](http://www.nerc.com/docs/pc/drdrtf/NERC_DSMTF_Report_040308.pdf)). To ensure these resources are effective and reliable, NERC is developing a demand response event data collection system to assess realization rates and measure their dependability. See <http://www.nerc.com/filez/drdrtf.html>.

Since being certified as the ERO in 2006, NERC has implemented a number of improvements in the Reliability Assessment Program and processes:

- A work plan has been developed with industry support to vastly improve the reliability assessments and this plan is now being executed.
- Emerging issues coupled with risk assessment has deepened the assessment impact by identifying high-impact, high-likelihood scenarios that affect bulk power system reliability.
- Scenario analysis processes have been put in place that enable comparison to specific reference cases to test the robustness of the plan and identify potential reliability concerns and NERC standard requirements.
- Emerging Issues are being investigated in detail, and actions taken to prepare for potential reliability issues, and develop requisite NERC standards of performance.
- Data checking and validation algorithms developed for the 2009 Summer Reliability Assessment (see the *Data Checking Algorithms Applied* Section of <http://www.nerc.com/files/Summer2009.pdf>).

NERC continues to advance the state-of-the-art reliability assessment methods to increase the granularity and clarity of its results and facilitate comprehensive and independent assessments.

**2. NERC shall review, analyze, and report on Regional self-assessments of the electric supply and bulk power transmission reliability, including reliability issues of specific regional concern.**

NERC staff provides an independent and increasingly comprehensive view of reliability assessment. As both NERC staff and NERC committees individually report to NERC's independent Board of Trustees, NERC staff and the PC (with support from the OC) provide an industry balance to ensure the independence and comprehensiveness of the reliability assessment process.

**Assessment Approach**

NERC's unique, independent ability to validate the data on Regional reliability gathered from the industry in the preparation of its reliability assessment reports incorporates industry

experts and deploys processes NERC and the Regional Entities use to perform their respective portions of the reliability assessments. These processes constitute an independent, rigorous, transparent, and time-tested method for validating the data and information provided and a vigorous and vibrant approach to assessing the reliability of bulk power systems. As stated in the introduction section of each of NERC's reliability assessment reports, NERC prepares its reliability assessments with detailed data, information, and regional self assessments from the Regional Entities as well as active support from the RAS under the direction of NERC's PC with additional review from the NERC OC.

The data, information, and Regional assessments submitted by each of the Regional Entities is periodically updated throughout the report drafting process to ensure it is as current as possible. This data and information is first analyzed, vetted, and attested to by the Regional Entities as part of their own assessment process, which follows a detailed set of assessment criteria established by NERC. After it is received, it undergoes further review by NERC staff and the RAS to ensure accuracy and consistency.

NERC also uses an active peer-review process in developing its reliability assessments. The peer-review process takes full advantage of subject-matter expertise from many sectors of the industry, which far exceeds any resources that could be assembled at the NERC-staff level. This process also provides an essential and independent check and balance for ensuring the validity of the data and information provided by the Regional Entities. Each Region prepares its data and an assessment according to a set of instructions provided by NERC with support from the RAS and the Data Coordination Working Group (DCWG). The resulting Regional assessments and data are assigned to two to four RAS members from other Regions for an in-depth and comprehensive peer review of the data and information. Reviewer comments are discussed at an open RAS meeting with the Regional Entity's representative(s); refinements and adjustments are made as necessary. Where necessary, NERC requests Regional Entities to provide additional data and supporting information to explain the basis of their reliability assessment conclusions. The Regional assessments and data are then subjected to scrutiny and review by the entire subcommittee to ensure members of the subcommittee and NERC staff are fully convinced that each Regional assessment, and the data supporting it, are accurate, thorough, and complete.

The entire reliability assessment document, including the Regional assessments, is then reviewed in detail by the MRC and NERC management. The report is endorsed by the PC before being submitted to NERC's Board of Trustees for final approval.

To further increase the robustness and transparency of the process and the conclusions in its LTRA, NERC sponsors public workshops to discuss preliminary findings of its assessment with industry experts and participants, identify industry concerns, explore emerging issues, and solicit improvements ([http://www.nerc.com/filez/ltra\\_workshop.html](http://www.nerc.com/filez/ltra_workshop.html)). In addition, NERC staff has recently joined Regional Entity reliability assessment stakeholder groups to deepen the mutual understanding of their processes, supply input and peer review of the self-assessments, and provide training for regional staff. Key suggestions from these workshops and meetings are reflected in the final assessment report.

## Regional Reliability Assessments

NERC's assessment requests to the Regional Entities include the development of a self-narrative. Regional Entities are directed to respond to an agreed-upon set of narrative questions focused on identifying potential Regional reliability concerns. These are reviewed by NERC staff, along with peer reviews and the PC for thoroughness and accuracy. The results are documented in the seasonal and LTRA reports.

Along with this review of the Regional assessments completed as part of the reliability assessments, NERC staff reviews confidential and non-confidential Regional reliability assessment reports and provides comments on reliability and processes directly to Regional Entities. For example, assessment of gas transportation, storage and supply, drought assessments, Regional/Subregional reports, reliability assessment approaches/processes, and annual ISO/RTO reliability assessments have all been completed as part of this Regional assessment.

To improve data validation, NERC began, in 2009, to review its internal data collection and validation processes to fortify its current data analysis system by designing, creating, testing, and putting in place additional automated data-checking systems to accommodate the increasing amount of data NERC collects for its reliability assessments. Data checking algorithms were developed for use in NERC's *2009 Summer Reliability Assessment* (see the *Data Checking Methods Applied* Section in <http://www.nerc.com/files/Summer2009.pdf>). These enhancements are an internally-developed system. In addition, further enhancements for NERC's *2009 Long Term Reliability Assessment* will compare demand and supply forecasts obtained from NERC's data request with other, publicly available forecasts for further validation and comparison. The aforementioned automated data checks with the *2009 Summer Reliability Assessment* and comparisons of demand/supply forecasts have and will complement the rigorous peer review performed by industry subject-matter experts described above. Further, this process can and will expedite peer review and increase the productivity of NERC staff and industry experts who are tasked with developing independent and comprehensive reliability assessments of bulk power system reliability.

- 3. NERC shall analyze major events and other off-normal events on the bulk power system and shall gather and disseminate information on events, risks, and uncertainties potentially affecting the reliable operation of the bulk power system, including:**
  - a. Assessing and reporting on significant issues, risks, and uncertainties that affect or have the potential to affect the reliability of existing and future electric supply and transmission.**
  - b. Investigating, assessing, and reporting on the potential impacts of new and evolving electricity market practices, new or proposed regulatory procedures, and new or proposed legislation on the adequacy and reliable operation of the bulk power system.**

- c. **Directing industry teams in the investigation and analysis of major events on the bulk power system.**
- d. **Maintaining a database of major events on the bulk power system.**
- e. **Communicating to the industry root causes of events that may be precursors of potentially more serious events, and other lessons learned from analyses, including issuing alerts (Advisories, Recommendations, and Essential Actions) and collecting, summarizing, and reporting information on the responses of owners, operators, and users of the bulk power system to such alerts.**

NERC's Event Analysis and Information Exchange Program performs analysis of large-scale outages, disturbances, and near misses to determine root causes and lessons learned; identification and continuous monitoring of performance indices to detect emerging trends and signs of a decline in reliability performance; and communications of performance results, trends, recommendations, and initiatives to those responsible to take actions; followed with confirmation of actions to correct any deficiencies identified.

The following tools and processes have been developed during the period from ERO certification (July 2006) to the present:

- A process for triage of system events reported to the Electricity Sector Information Sharing and Analysis Center (ES-ISAC) to determine the level of analysis necessary.
- The NERC Event Analysis Tool (NEAT) to aid in the event triage process and centrally gather preliminary information on system events.
- The NERC Alerts process to notify the industry of potential problems found during event analyses.
- An Event Analysis Tracking System to track the events being analyzed.
- A Disturbance Element Tracking System to provide metrics on problems that were initiating, causal, contributory, or incidental to system events. 23 Disturbance Elements have been tracked from the events analyzed.
- NERC advocacy of improvements to system protection and modeling improvements based on the findings from event analyses.

NERC Event Analysis staff have reviewed or participated in the analyses of over 100 system events since July 2006. That number includes participation in seven detailed event analyses of system disturbances that were led by Regional Entities and one detailed event analysis that was led by NERC. As part of the on-going communication and information exchange efforts, quarterly reports were prepared and presented to the NERC Planning and OCs, the MRC, and the NERC Board of Trustees. These reports include findings resulting from the analyses and on disturbance trends. Similar presentations have also been made to the Transmission Owners and Operators Forum. This work has resulted in six alerts being issued to the industry. Improvements made to activities and operations since July 2006 include:

- Established the Event Analysis Coordinating Group to support the Event Analysis Program by providing coordination between the Regions and interconnections to facilitate consistency in the event analysis processes to ensure that NERC and Regional event analyses are complete and timely.
- Hired a Manager of Alerts to run the alerts process.
- Hired a Manager of Event Analysis information to shepherd lessons learned and alerts based on event analyses.
- Developed cross-Regional training of system protection subject-matter expertise in forensic analysis.
- Improving the NEAT system to improve the usability and efficiency of NERC event analysis staff.

The Event Analysis Program has been effective in analyzing major events on the bulk power system. Each of the analysis efforts has uncovered important information on risks and uncertainties potentially affecting the reliable operation of the bulk power system. This information is being disseminated to the industry. Since ERO certification in July 2006, the Event Analysis Program has made numerous improvements, and has added capabilities to more quickly triage events, deploy resources to complete system studies, and issue industry alerts. However, stakeholders have expressed concerns that event analyses are being conducted for too many bulk power system occurrences (i.e., for occurrences that are not significant enough to warrant an event analysis); that event analyses are taking too long to complete, with the result that dissemination of root-cause and lessons-learned information from an event analysis is not timely; and that the speed of completion of and dissemination of information from event analyses is adversely impacted because a compliance violation investigation is often conducted in conjunction with or shortly after the event analysis. These concerns, along with analysis of them and possible actions in response, are discussed in detail in **Attachment 2** of this report.

**4. NERC shall establish and implement programs for recording, analyzing, and publicizing performance metrics and benchmarks for the reliability performance of the bulk power system and of its owners, operators and users.**

NERC has established several programs for recording, analyzing, and publicizing performance metrics and benchmarks for the reliability performance of the bulk power system and of its owners, operators and users, including the Generating Availability Data System (GADS), the Transmission Availability Data System (TADS), and specific metrics and benchmarking programs, as discussed below.

**Generating Availability Data System (GADS) Program**

The GADS Program comprises a unique series of databases used extensively throughout the industry to collect, record, and retrieve operating information for improving the performance of electric generating equipment. GADS provides assistance to those researching information on power plant availability; supports equipment reliability and availability analyses, and other decision-making processes; facilitates the use of GADS data in conducting assessments of generation resource adequacy; and reports on trends in generating equipment performance.

## 1. GADS Publications and Software

The annual [Generating Availability Report \(GAR\)](#) and its accompanying [Generating Unit Statistical Brochure](#) present data for five individual years and for a five-year average with generating unit availability statistics provided on both a capacity weighted and non-weighted basis. These reports are available for download at no cost.

The [Historical Availability Statistics \(HAS\)](#) report provides annual performance information starting from 1982 through the most current year for the same groups of units that appear in the traditional GAR reports. HAS includes annual, five-year, ten-year, and multi-year interval reports for each of 63 generator unit groups. GAR and HAS are combined into one self-expanding program. These Windows-based programs are free to all interested parties and can be downloaded from the NERC Website.

[pc-GAR](#) is a user-friendly information software package, designed for use on personal computers, for analyzing power plant performance data. pc-GAR provides users access to millions of event records collected by GADS Services since 1982. It is used by hundreds of utility analysts in 12 countries and is the model used by the World Energy Council (WEC) Performance of Generating Plant (PGP) Committee. The program enables analysts to evaluate generator equipment performance on generating units, equipment groups, and major components. Users can access more than 2,000 cause codes collected from outage records, multiple years of performance, and statistical information. In 2005, GADS Services introduced a new software product using the GADS data called pc-GAR MT. The purpose of the software was to calculate the time between failure and the time to repair based on pc-GAR retrieval criteria, event types, and cause codes.

## 2. GADS Workshops

The annual GADS Data Reporting Workshop is multi-day meeting that focuses on data collection and reporting techniques. It emphasizes the importance of accurate data reporting and builds confidence in GADS data users who come away satisfied that GADS reports provide an accurate resource of generating unit performance information. The workshop is open to anyone interested in learning about the data-gathering process. Special “in-house” workshops are available to those interested in training their entire staff at their home facility.

## 3. GADS Projects and Activities

GADS supports a number of projects and activities designed to help generating facility operators improve unit reliability and performance. These include:

[Benchmarking Services](#) — a unique service for locating peer units of similar design and operating characteristics that establishes performance benchmarks for improving individual unit reliability and availability. Both domestic- and foreign-based utilities have commissioned GADS Services to benchmark generating units.

Special Studies — special generating unit performance studies for entities whose requirements cannot be met by any of the GADS products or publications. Since 1982, GADS Services has conducted thousands of studies dealing with a variety of analyses relating to generating units and equipment/component failures.

Manufacturers Support Services — allows manufacturers to review their equipment failures and increase the reliability of their equipment. Each year, GADS receives more than 100,000 outage events containing vital information on almost every major generating unit in the United States and Canada. GADS matches these data with the design information on the unit's major equipment, providing a history of equipment outages and repairs for use in increasing equipment reliability. Manufacturers benefit by having a low cost resource to access and analyze historical equipment problems; power generators benefit as manufacturers learn from equipment failure histories and improve their equipment.

High-Impact Low-Probability (HILP) Analyses — help warn power generators about infrequent forced outage events that could cripple generating plants for a long period of time. By reviewing the outage records collected by GADS, lessons are learned from the experiences of others in order to prevent the same problem from occurring again. The hundreds of thousands of historical equipment records at the heart of the HILP analysis contain the time and energy impacts of each unit outage. Previous HILP studies involved water induction, coal plants with shared equipment, and several types of equipment failures. Through this program, GADS is available to assist power generators to maintain or increase generating unit availability and reliability.

GADS has continued to improve its database by staying abreast of changing industry needs. For example, over the last several years, GADS has upgraded the pc-GAR by adding new combined-cycle information for analyzing the individual gas turbines (GT), the steam turbine or the entire block (the combination of GT and steam turbine). GADS is also adding wind turbine, the first renewable generating source, to its database so companies can benchmark wind turbine equipment.

GADS is an active member of the American Society of Mechanical Engineers (ASME) Power Division. Through its work with the ASME Reliability, Availability and Maintainability (RAM) Committee, GADS encourages top-quality technical papers and panel discussions at the annual ASME Power Conferences. Each year papers are presented that demonstrate new ways to use GADS data to improve power plant performance.

GADS was an active member of the latest revision of IEEE's Standard 762, "Definitions for Reporting Electric Generating Unit Reliability, Availability and Productivity." As a result of NERC's involvement with IEEE 762, NERC now has the new modified standard for measuring the performance of cycling and peaking generating units (demand-related reliability) as part of its software and data calculations.



GADS collects event and performance data for GTs and jet engine units. Strategic Power Systems, Inc. (SPS) also collects these data for its Operational Reliability Analysis Program database. Because it was inefficient for power generators to report the same information in different formats to both databases, NERC and SPS created a common software program both organizations can use.

GADS is developing a working relationship with the Institute of Nuclear Power Operations (INPO) and the International Atomic Energy Agency (IAEA) Power Reactor Information System (PRIS) members. GADS hopes to cut down the reporting requirements of United States nuclear operators by reporting only once to GADS, INPO, and PRIS databases.

As a member of the United States Energy Association (USEA), NERC supports the generating availability improvement discussions within USEA, World Energy Congress (WEC), and the WEC PGP Committee. GADS also supports the WEC in its analysis of electric power supplies. GADS staff participates in WEC committees and teaches workshops in developing countries. The WEC PGP Committee is developing a GADS-type program for collecting power plant outage data worldwide. GADS has worked with PGP members over the past years to provide WEC with GADS-type procedures for the uniform collection and reporting of plant outage data.

Starting in 2004, GADS Services opened its database to generating companies outside North America. A number of European, Asian, and South American companies wanted to report GADS data in GADS format to NERC in exchange for access to manufacturer-specific data, available to GADS members only. For a nominal annual fee, international affiliate GADS members can be part of GADS and receive discounts on the purchase of the pc-GAR software.

GADS has been coordinating with members of the Canadian Electricity Association (CEA) to convert CEA data into GADS format. For several years, CEA members wanted access to GADS but only wanted to collect and report data in one format. In 2009, the translation program will be in place to convert CEA data into GADS for use by all North American utilities.

In 2008, GADS met with members of Comision Federal de Electricidad (CFE) of Mexico regarding CFE reporting to GADS. Work is underway to convert CFE data to GADS format and report to GADS starting the second quarter of 2009.

### **Transmission Availability Data System (TADS)**

The Transmission Availability Data System (TADS) collects data from transmission owners that are on the NERC Compliance Registry to measure the historical performance of the four elements listed below. All cited reports are posted at <http://www.nerc.com/filez/tadstf.html>.

- AC Circuits  $\geq$  200 kV (Overhead and Underground Circuits). Radial circuits are included.
- DC Circuits with  $\geq$  +/-200 kV DC voltage
- Transformers with  $\geq$  200 kV low-side voltage

- AC/DC Back-to-Back Converters with  $\geq 200$  kV AC voltage, both sides
- Program Achievements and Measurables

The NERC PC formed a task force in October 2006 to develop a proposal for quantifying and measuring transmission system performance and reliability. This proposal was to identify the type of transmission availability data that transmission owners should report to NERC; a single process for collecting such data that avoids duplication of effort; the transmission availability statistics that could be calculated from the reported availability data; and the guidelines for release of the data and statistics. The PC approved the final report of the task force in June 2007, and the NERC board approved the Phase I data collection in October 2007. NERC contracted in 2008 for development of custom software for TADS and is conducting training for data reporters under the guidance of a contracted project manager. Based on these efforts and progress to date, NERC is working with the Energy Information Administration (EIA) to eliminate its requirement for transmission owners to report transmission availability data as part of Form EIA-411, Schedule 7.

TADS is being implemented in two phases. Phase I requires the submittal of Automatic Outage data as described in the TADS Revised Final Report dated September 27, 2008. Data collection was initiated in 2008 as authorized by the NERC board. The TADS Task Force prepared a report on the first quarter's results (TADS 1st Quarter 2008 Phase I Metrics and Data Report dated October 30, 2008). Phase I is mandatory for all United States transmission owners and voluntary for non-United States based transmission owners. Phase II was authorized by the NERC board to require the submittal of Non-Automatic Outage data beginning in 2010. Phase II is described in the TADS Phase II Final Report dated September 11, 2008. Phase II is mandatory for all United States transmission owners and all non-United States based transmission owners who are NERC members.

Specific objectives for the TADS Program in 2009 include:

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

### **Metrics and Benchmarking**

The purpose of NERC's metrics and benchmarking activities is to identify, understand, and whenever possible, facilitate adoption of best practices or techniques that help improve

reliability performance over time. NERC's approach follows a four-phase continuous process improvement cycle — plan, collect, analyze, and adapt — aimed at long-term results. Through this cycle, NERC can track performance and progress towards sustained reliability improvement. The analysis results will be tied into standards refinement and development, be used in assessment and improvement activities, help identify training and education needs, and more. The metrics and benchmarking will also be used to measure effectiveness of reliability standards and NERC's Compliance Enforcement Program.

NERC has committed resources to metrics and benchmarking development since 2006. At that time, NERC launched its reliability indicator monitoring and tracking system. NERC formed an internal benchmarking team in 2007, bringing functional expertise and the perspectives from each NERC program together to help direct the effort. NERC's PC formed a Reliability Metrics Working Group (RMWG) in early 2008 to advise and support the needs of the metrics and benchmarking program, especially metrics development for assessing an Adequate Level of Reliability.

The RMWG has developed an open process for industry metrics vetting (see Metrics Templates at <http://www.nerc.com/filez/rmwg.html>). A draft report outlining this process and identifying the first set of metrics addressing the adequate level of reliability was sent to the NERC Planning Committee for review and endorsement ([http://www.nerc.com/docs/pc/rmwg/RMWG\\_Report\\_May%20-29-09\\_v2.pdf](http://www.nerc.com/docs/pc/rmwg/RMWG_Report_May%20-29-09_v2.pdf)).

As part of its continued efforts to enhance the Reliability Metrics and Benchmarking Program, NERC developed a draft plan<sup>184</sup> for an advanced system for establishing those metrics. The objectives of this plan are to develop guidelines for acceptable metrics, assess available metrics, maintain and monitor reliability indicators on NERC's Website (see <http://www.nerc.com/page.php?cid=4/37>), and develop from analysis of these metrics appropriate reliability performance benchmarks. The plan calls for the development and use of three major indices as reliability performance metrics used to judge the relative performance of the bulk power system:

- **Reliability Performance Gap (RPG):** designed to measure how far the system is from expected performance under contingencies (dynamic conditions). RPG events are the disturbances that significantly affect the integrity of interconnected system operations. They are divided into five categories to take into account their different system impact.
- **Adequacy Gap (AG):** designed to measure the capacity and energy shortage from expected adequacy level under steady state conditions. AG events are divided into three main categories, exemplified in the three categories based on the Standard EOP-002-0 (Capacity and Energy Emergencies).

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<sup>184</sup> [http://www.nerc.com/docs/pc/rmwg/Reliability\\_Metrics\\_white\\_paper\\_draft.pdf](http://www.nerc.com/docs/pc/rmwg/Reliability_Metrics_white_paper_draft.pdf)

- **Violation Index (VI):** designed to measure the reliability improvement from compliance with NERC Reliability Standards. The VI is designed to measure improvement in compliance with standards. The VI for each entity is weighted based on each violation's VRF and VSL. A VRF and VSL weighted-violation average can determine the change in reliability levels due to confirmed standard requirement violations. The weighting values can be derived by applying similar ratios developed in the NERC *Sanction Guidelines* to assess the potential consequences of a particular violation. Violations of a higher risk factor requirement have a higher weighting value in the index than violations of lower risk factor requirements. The index decreases if the compliance improvement is achieved over a trending period.

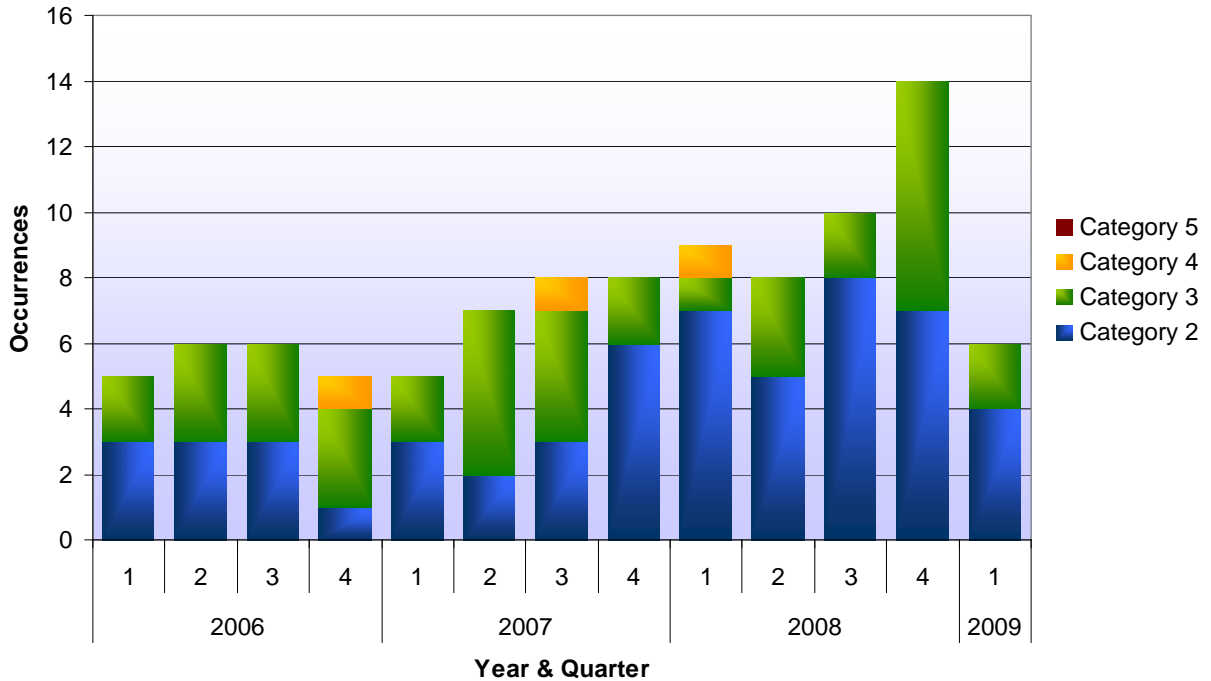
These three indices are intended to capture and represent many complex reliability parameters into easy to understand reliability performance metrics.

NERC performed its initial analysis of reliability metrics from the last six years and results of historical trends of reliability are provided for the first time in the *2008 Long-Term Reliability Assessment*. Understanding these trends can lead to improved bulk power system reliability. For example, indication of ongoing threats to reliability can stimulate pre-emptive action in future designs towards maintaining bulk power system reliability.

Figure 1 below depicts all Category 2 through 5 system events for 2002-2008 and the first quarter of 2009.

**Figure 1 – Disturbance Event Trend**

**Number of Disturbance Events by Severity, Year & Quarter**

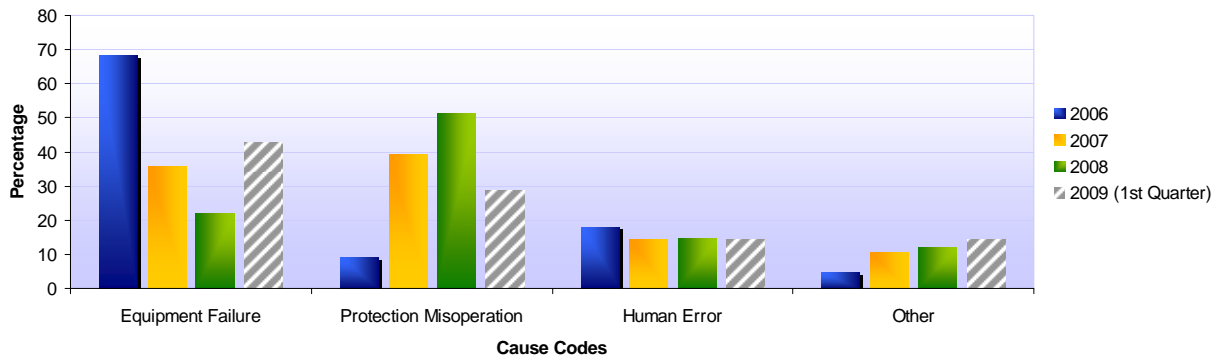


These data clearly indicate that gaps exist between actual performance and expected system behavior under actual operating conditions. Ultimately the most important measure of operating reliability is that the number of events declines towards zero.

Figure 2 below summarizes the contribution of leading causes to the total number of events in 2006, 2007, 2008 and the first quarter of 2009.

**Figure 2 – Reported Events by Cause Codes**

**Bulk Power Disturbances by Cause and Year (2006-2009)**



More work is required to examine the root causes of these events, including the significance of protection system misoperations, the effects of human activities (both by utility

workers and the public), and the influence of equipment failures on reliability performance. The objective is to recognize and eliminate unreliable actions and at-risk conditions.

The System Protection Initiative is a top priority for NERC along with its stakeholder committees and standard drafting teams. Protection system misoperations are a leading root cause of bulk power system disturbances, either causing or exacerbating a growing percentage of bulk power system outages over the past several years. For example, these misoperations contributed to over 50 percent of system disturbances (Categories 2–5) in 2008. In April 2009, NERC launched a comprehensive initiative ([http://www.nerc.com/fileUploads/File/News/spi-letter\\_24Apr09.pdf](http://www.nerc.com/fileUploads/File/News/spi-letter_24Apr09.pdf)), designed to coordinate ongoing activities and improve the performance of power system protection and control systems. The System Protection Initiative focuses on the following areas:

1. Relay Loadability
2. Protection System Redundancy
3. Protection System Coordination
4. Generator Frequency and Voltage Protective Relay Coordination
5. Transmission and Generation Protection System Misoperations
6. Protection System Maintenance

In 2008, NERC's reliability indicators were tracked and updated with revised performance indices and leading indicator trends.<sup>185</sup> These performance indices and trends will be monitored throughout 2009 and changes in reliability performance reported. With the experience gained in 2009, benchmarks for each indicator may then be developed.

Since being certified as the ERO, NERC has taken on the role of being an independent source of reliability performance information, thereby fulfilling one of the recommendations in the April 2004 U.S.–Canada Power System Outage Task Force Report on the August 14, 2003 blackout. The GADS program, which NERC has operated for many years, provides an independent source of reliability performance information for the generation sector of the bulk power system. NERC is developing TADS to provide a comparable, independent source of reliability performance information for the transmission sector of the bulk power system. The greatest use of TADS data will be for outage-cause analysis and outage-event analysis. Event analysis will aid in the determination of credible contingencies and will result in better understanding. This understanding should be used to improve planning and operations. Ultimately, these improvements should result in improved transmission system performance. In addition, trending performance within each Region, against its own history, will show how that Region's performance is changing over time.

The analyses described above demonstrate that the metrics and benchmarking program is a performance-oriented, results-driven reliability enhancement program which prepares the industry to address new standards and emerging reliability issues, and may ultimately lead to

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<sup>185</sup> <http://www.nerc.com/page.php?cid=4|37>

new standard authorization requests. By defining various metrics and indices, it is possible to use amassed historical data to track the success of various initiatives and develop leading indicators and root causes of unreliable system performance based on past events. As indicated in the event-tracking and root-cause analysis described above, the advanced metrics system is used to (1) measure past and current reliability and progress in ensuring reliability, and (2) identify factors that positively or negatively impact reliability and reliability problems and solutions. Another critical role the metrics system plays is to measure effectiveness of reliability standards and enforcement programs. Reliability performance metrics and benchmarking activities are a key part of a continuous reliability improvement cycle.

**F. Situation Awareness and Infrastructure Security Program**

- 1. NERC shall monitor conditions on the bulk power system and provide leadership coordination, technical expertise, and assistance to the industry in responding to events, including by:**
  - a. Maintaining real-time situation awareness of conditions on the bulk power system.**
  - b. Serving as the coordinator of the Electric Sector Information Sharing and Analysis Center (ES-ISAC).**
  - c. Notifying the industry of major bulk power system events that have occurred in one area and have the potential to impact reliability in other areas.**
  - d. Maintaining and strengthening high-level communication, coordination, and cooperation with governmental authorities regarding real-time conditions.**
  - e. Facilitating information exchange and coordination among reliability service organizations.**

NERC has been developing its ability to monitor reliability of the individual interconnects that comprise the North American bulk power system. NERC's Situation Awareness and Information Security (SAIS) program manages a NERC/ES-ISAC duty position that is responsible to receive event and incident reporting from bulk power system entities, triage event information as appropriate, develop a summary of major events, and share information with the appropriate authorities. NERC SAIS/ES-ISAC has monitored conditions on the bulk power system and conducted numerous information sharing calls with the electricity sector, other infrastructures, and government partners. The coordination calls have been conducted in response to hurricanes, wildfires, security concerns, and frequency disturbances.

**Electric Sector-Information Sharing & Analysis Center (ES-ISAC)**

The ES-ISAC serves the electricity sector by facilitating communications between electricity sector participants, federal governments, and other critical infrastructures. NERC has overlapping responsibilities in the United States under section 215 of the FPA as the ERO to

monitor cyber-security risks that can threaten the reliability of the bulk power system. The NERC Chief Security Officer (CSO) and SAIS Vice President is responsible for both objectives and has consolidated both functions under the ES-ISAC.

It is the job of the ES-ISAC to promptly disseminate threat indications, analyses, and warnings, together with interpretations, to assist electricity sector participants in taking protective actions. As the ES-ISAC, NERC gathers, disseminates, and interprets security-related information for the entire electricity sector. The Commission has oversight of NERC's alerting process for bulk power system entities in the United States under section 215, and Canadian authorities provide guidance for alerting entities in Canada.

This arrangement serves two functions (voluntary CIP partnership function as the ES-ISAC and the ERO reliability monitoring function under section 215) with one organization working toward a common objective. The ES-ISAC is a United States construct developed under Presidential Decision Directive 63 and is meant to serve all entities in the United States electricity sector. The U.S. Department of Energy (DOE) designated NERC as the electricity sector coordinator for critical infrastructure protection. To fulfill this obligation, NERC operates the ES-ISAC and provides the framework for industry policy-level engagement through the Electricity Sector Coordinating Council (ESCC). The ES-ISAC also works closely with the U.S. Department of Homeland Security (DHS) and [Public Safety Canada](#) to ensure the critical infrastructure protection functions are coordinated with the governments of the United States and Canada.

### **Situation Awareness Tool Project for North American Authorities**

This project and ongoing function will allow NERC to assemble a North American-wide reliability picture. The project is working to develop an initial plan, based on Commission requests, to enable 100 percent of reliability coordinators in the United States to display bulk power system conditions to the Commission, NERC, and Regional Entities. This will be accomplished through an internet-based system that provides visual displays for the Commission, NERC, and the Regions while all the data resides at the reliability coordinators. Future stages will include discussions with Canadian stakeholders to investigate the benefit and desire to expand the approach to include Canadian information.

Several recent achievements include the hiring of a vice president to oversee NERC situational awareness functions, enhancements to the ES-ISAC, and successful collaborations to develop a uniform approach for the provisioning of information to monitor reliability conditions. The ES-ISAC has been maturing its analytical process and reporting capabilities, through the initiation of several improvement projects. This includes working with the compliance and event analysis programs to streamline and regularly test the notification lists used by NERC to improve the distribution of alerts, educate recipients on all forms of alerts, and demonstrate the ability to provide information and instructions in an efficient and effective manner. NERC has increased the development and dissemination of CIP alerts, with ten alerts being issued in the last quarter of 2008.



The ES-ISAC's renewed focus on operational excellence has prompted significant process engineering and rigorous use of the NERC ROP §810 formal notification process developed and approved in 2007. Recent enhancements and industry efforts have resulted in rapid improvements in the acknowledgement and response rate to Level 2 or higher alerts. NERC has issued two, Level 2 CIP Industry Recommendations (Alerts), one in September and another in October 2008. There has been significant improvement to NERC's alerts process and industry's performance from an alert response rate of just over 58 percent for a pool of approximately 1,200 recipients in October to the most recent response rate from a pool of approximately 1,800 recipients of over 94 percent. NERC's steps to improve the process included a training Webinar with over 1,000 participants, provision of an "Alerts Frequently Asked Questions (FAQ)" document, and notable process improvements. The launch of a new online acknowledgement tool greatly improved NERC's ability to account for responses and follow up with non-respondent entities. This enhanced capability to identify, evaluate, and provide notifications of CIP-related reliability concerns will better position bulk power system entities to uniformly mitigate risks.

NERC's use of alerts is applied across the North American bulk power system. NERC CIP leadership has traveled to Canada to coordinate with federal authorities and integrate work processes so NERC can assist in achieving Canadian CIP goals. The alert capability is seen as an important tool for communicating threat and vulnerability information. The threat and vulnerability evaluation and alert generation process includes participation from Public Safety Canada and the Royal Canadian Mounted Police (RCMP).

NERC recognizes the need to mature the ES-ISAC, enhance its coordination and communication procedures, and develop more effective ways to assemble knowledge pertaining to bulk power system operating conditions. NERC has been able to improve the effectiveness of these activities after a series of learning opportunities during 2007. NERC is improving its capability by reorganizing the SAIS program to provide a greater focus on situation awareness functions, established mechanisms for executive-level guidance and direction, reaching out to form effective industry and regional collaborations, and increasing the resources dedicated to the operation of the ES-ISAC.

Although the ES-ISAC has been operated by NERC since 2000, it has previously lacked a clear governance structure and guiding charter document. NERC's Board of Trustees has formed the Electricity Sector Steering Group (ESSG) to provide executive-level guidance and strategic direction for the ES-ISAC. The ESSG provides strategic and policy guidance to the Electricity Sector Coordinating Council (ESCC) and to NERC in its role as the operator of the ES ISAC. The ESSG was formed in the second quarter of 2008 and has conducted a number of meetings to-date. The ESSG is providing additional direction and an excellent channel for senior executive's engagement with NERC staff and ESCC members. The ESSG conducted an open meeting on December 10, 2008 to discuss existing electricity sector public and private partnership engagement activities. Discussion and direction was provided on topics such as the ESCC engagement with DHS on Tier I and II critical asset list criteria, United States clearances for the sector, future classified briefings, and vulnerability management coordination.

2. **NERC shall provide tools and other support services for the benefit of reliability coordinators and other system operators, including:**
  - a. **Maintaining the reliability and effectiveness of all mission-critical operating reliability support systems and services.**
  - b. **Investigating, analyzing, and, if deemed appropriate, supporting implementation of, high-speed real-time system measurements, including phasors, in predicting the behavior and performance of the Eastern Interconnection.**
  - c. **Facilitating real-time voice and data exchange services among reliability coordinators.**

NERC manages the provision of system reliability tools, such as the Interchange Distribution Calculator (IDC), facilitates reliability coordinator communications, and helps to incubate next generation reliability tools. Many of the NERC-provided reliability tools are essential to registered entities to enable them to effectively carry out reliability responsibilities. The industry has become dependent on the tools to implement processes required by both NERC Reliability Standards and NAESB Business Practices. The tools enable processes that would be difficult to implement manually with the current level of staffing. NERC has completed a review of all of the provided reliability tools and is in the process of developing life-cycle strategies, including turning the rights to the tools over to other entities or businesses where appropriate. Examples of NERC-managed tools and NERC-provided situation awareness functions include:

- **Interregional Security Network (ISN):** An information sharing network used by Reliability Coordinators (RC) to exchange data with each other and with NERC. ISN data is exchanged in real-time via the Inter Control Center Protocol (ICCP). The Data Exchange Working Group is responsible for decisions relating to the data that is exchanged over the ISN. The ISN travels atop NERCnet, a private frame relay communications network.
- **NERC Factor Viewer (NFV):** This tool allows transmission customers in the Eastern Interconnection to view various factors related to transmission congestion (generation shift factors, transmission distribution factors, load shift factors, and generation and load distribution factors). This information is especially important to transmission customers during Transmission Loading Relief (TLR) 3 events and above when transmission paths become constrained. It allows reliability coordinators to concentrate on managing congested flowgates uninterrupted by transmission customers' requests for information.
- **System Data Exchange (SDX):** This tool provides a central repository of all scheduled and ongoing generator and transformer outages throughout the Eastern Interconnection. The SDX was created in response to the increased need for accurate data exchange used to support reliability related applications, such as the IDC, and provides input to the IDC. This data is made available to NERC-approved operating reliability entities who have agreed to terms of the NERC Data Confidentiality Agreement. Data from the SDX is used within the IDC and information may be downloaded for use in updating calculations

of available transfer capability. This tool is used by all Eastern Interconnection reliability coordinators and by some balancing authorities and transmission operators. This tool provides input to the IDC.

- **Central Repository of Curtailment Events (CRC):** This tool is a limited-access Website that allows transmission customers to view current and historical TLR activity, system flows, and energy emergency alerts. The NERC Factor Viewer is accessible from this Website, and the Book of Flowgates and the IDC reference base case can be downloaded from the site. This Website was created at the request of NERC's Market Interface Committee in response to FERC Order No. 605, mandating public access to curtailment information. It provides ready access to historical curtailment information for events analysis purposes.
- **Book of Flowgates (BoF):** This dataset is a compendium of all flowgates in the Eastern Interconnection. It is an essential input to the IDC. The existing BoF is an MS Excel spreadsheet and is updated via e-mails to and among the NERC Distribution Factor Working Group (DFWG) each month. The original BoF contained 730 flowgates and nine tables; it now contains more than 1,500 flowgates and 13 tables. NERC is currently in the process of developing a replacement tool for the current BoF. The future BoF database project will provide a centralized online system for managing changes to the BoF, enable users to download customized flowgate reports, and serve as a tool for storing Eastern Interconnection model files.
- **Near-real-time monitoring of Area Control Error (ACE) and interconnection-wide frequency for RCs:** This tool gives RCs time to work with Balancing Authorities (BA) to make corrections in resources and dispatch. It was developed in 2004 and has undergone several enhancements from 2006 through 2008. Application allows NERC RCs and BAs to be alerted when ACE is violated or frequency variations occur.
- **Frequency Monitoring and Analysis (FMA) Using Phasor Measurements:** This tool can be used to identify the cause of interconnection frequency fluctuation and frequency response deterioration. It can help guide actions to remedy the situation. The system will include data collection, analysis, and report capabilities.
- **Real-Time Resources Adequacy Intelligent Alarms:** Intelligent alarms are providing RCs, BAs, and the Resources Subcommittee key, timely information for critical Resource Inadequacies conditions such as major tie-errors, inaccurate load-forecast, and inadequate frequency response. The system has been in production and broadcasting alarms since January 2007. The intelligent alarms include key performance information (intelligence) to quickly identify the alert's root-causes and allow the RCs to determine possible corrective actions.
- **Inadvertent Interchange Application:** This tool facilitates the entering of monthly scheduling data, and then assists in the monitoring and resolution of reliability issues originated by inadvertent interchange imbalances with adjacent BAs. It also facilitates the submittal of monthly inadvertent performance standard reports to NERC. This

application is an adaptation of a tool developed by SPP and has been in production since January 2007. Inadvertent interchange application measures the health of each interconnection by summarizing the inadvertent interchange balances, identifying which BAs are leaning on the interconnection, and which BAs are supporting frequency.

- **Wide-Area Real Time RBC Monitoring:** The Reliability Based Control (RBC) concept was developed by the Balance Resources and Demand standard drafting team and is currently being field tested for accuracy and operational benefits, and will continue to be developed through the standards process. This tool will monitor field-trial performance for reliability-based control standards. RBC standards are undergoing field trial. The RBC concept makes each BA accountable for its ACE on a real-time basis through a frequency-dependent compliance measure. This tool gives the BAs, the RCs, and the Resources Subcommittee visual and statistical methodologies to monitor the BAs' ACE against the real-time RBC values.
- **North American SynchroPhasor Initiative (NASPI):** This technology and associated interconnect-wide networks will improve the monitoring of the bulk power system in North America. It will provide the operators with greater situation awareness, allow for earlier detection of disturbances on the interconnections, and more rapid investigations of disturbances after they have occurred. Synchrophasors will support reliability by increasing situation awareness and providing operators with tools to better control the interconnections. In early 2008, NERC decided that the promise of synchrophasors, for grid event forensics investigations and improving future operational reliability, was so great that it justified hiring a project manager to focus and accelerate the industry's adoption of phasor measurement units (PMUs) and phasor-data applications. In July 2008, NERC's board approved the plan developed by the project managers and NERC management, which included hiring TVA under contract to continue operating the existing Eastern Interconnection phasor aggregator and to develop and operate the Generation 2 regional PDC, funding the project manager activities, and funding NASPI-related legal work to develop an information sharing framework. NERC will work with the NASPI leadership team to develop a roadmap and vision for integrating PMU, NASPInet, PDC, and phasor-data applications technologies.
- **Interchange Distribution Calculator (IDC):** This tool is used primarily to implement NERC's TLR Procedure. Each RC in the Eastern Interconnection has the option of invoking the NERC TLR or other agreed-upon local procedure to relieve network congestion. In accordance with Requirement 2 of reliability standard IRO-006-3 (Reliability Coordination — Transmission Loading Relief), a RC experiencing a potential or actual system operating limit or interconnection reliability operating limit violation within its reliability area shall, at its discretion, select from either a local (Regional, Interregional, or Subregional) TLR procedure or an Interconnection-wide procedure. The Interconnection-wide TLR procedure for use in the Eastern Interconnection is provided in Attachment 1 to Standard IRO-006-0, and is programmed in the IDC.
- **Reliability Coordinator Information System (RCIS):** This system provides the exchange of operational and security information in real time. It represents a uniform,

easy-to-use mechanism for information exchange as well as a central, secure location for viewing information pertinent to all RCs. The RCIS has been in service since 1999. The application was rewritten and new functionality added in 2007. The RCIS provides the ability to rapidly share information directly related to operating conditions on the bulk electric system.

- **Spare Equipment Database (SED):** This dataset is an inventory of spare transformers that may be available to a utility in the event of an emergency. The SED application has two functions: the first allows owners to enter and update information about their spare transformers into the database; the second allows authorized NERC staff to search the database to locate equipment that meets specified criteria. Should a spare transformer be needed in an emergency situation, a utility may enter a request to NERC staff, documenting the type of equipment it requires. The dataset matches needs to resources and supplies contact information to the requester for follow up.
- **Transmission Availability Data System (TADS):** This database, which is described in greater detail in the discussion of the NERC Reliability Assessment and Performance Analysis Program, is being used to collect information from the industry about the availability of transmission lines operating above 220 KV. It will collect the causes for outages and be used to develop performance benchmarks. This system supports reliability by gathering information about critical components of the bulk power system and organizing the information for the industry to develop meaningful performance benchmarks.
- **Transmission System Information Network (TSIN):** This software tool enables industry participants to register for access to OASIS nodes, and to document information necessary to participate in the industry's electronic tagging process.

NERC has been supporting, enhancing and developing next generation bulk electric system reliability tools since 2006. In recognition of the importance of these tools, NERC has embarked on an effort to develop a framework to identify requirements that might lead to new reliability tools, plan for the best approach for the incubation and management of current and future tools, and promote a future model for reliability tool development and sustainment. In 2007 NERC established guidelines for reliability tool development and operations. NERC continued to make progress in laying a foundation for this effort through the creation of a life-cycle evaluation process for future reliability tools in 2008. Since 2006, NERC has incubated three additional reliability tools and made several enhancements to existing tools.

NERC is committed to improving its ability to efficiently and effectively develop and manage existing and future reliability tools. The SAIS program will work closely with NERC's Chief Information Officer and the Technology Committee of the Board of Trustees to implement the new framework to better manage the portfolio of reliability tools. The new framework takes a "cradle to grave" approach and will require NERC to develop plans to sustain, enhance, and in some cases turn over existing tools to other organizations. NERC recognizes the importance of today's tools and believes new technology will provide better ways to monitor and manage the bulk power system.

- 3. Critical infrastructure protection – NERC shall:**
- a. Address critical infrastructure protection issues across NERC program areas consistent with each program’s scope, authority, policies, procedures and protocols.**
  - b. Take a leadership role in critical infrastructure protection of the electricity sector, and coordinate electric industry activities to promote critical infrastructure protection of the bulk power system in North America, so as to reduce vulnerability and improve mitigation and protection of the electricity sector’s critical infrastructure.**

NERC’s Critical Infrastructure Protection (CIP) activities include the development of CIP standards, CIP compliance and enforcement program, security guidelines, and coordination with federal authorities. In an August 2006 filing with the Commission, NERC requested approval of eight new cybersecurity standards (CIP-002-1 to CIP-009-1) to provide a comprehensive set of requirements to protect the bulk power system from malicious cyber attacks. On January 18, 2008, the Commission issued Order No. 706, approving as mandatory the eight CIP reliability standards submitted by NERC in August 2006.<sup>186</sup> Approval of the CIP reliability standards was a major step forward in ensuring the reliability of the electric grid because these standards set forth specific requirements that are binding on users, owners and operators of the bulk power system to safeguard critical cyber assets.

NERC has organized for, and began to resource, the CIP program as a core program. NERC has hired a recognized CIP expert as Chief Security Officer (CSO) to lead these efforts. NERC has enhanced the management and governance structure by making the CSO a direct report to the CEO and establishing the ESSG to provide program guidance. NERC has recognized the need to elevate the importance and urgency associated with cyber threats. Several new CIP initiatives were completed in the last quarter of 2008 to mobilize bulk power system protection efforts. These initiatives include enhanced industry executive awareness and participation through the establishment of the ESSG and holding a cyber summit in September 2008. NERC has made significant organizational changes by consolidating responsibility for coordination of security matters across all NERC activities into a single responsible area and hiring the CSO to oversee the enhanced program.

NERC has already completed a review of its standards process to support the development of future CIP standards and respond to urgent security concerns. This review was conducted by NERC staff and the Board of Trustees in coordination with the Standards Committee. The review has identified changes that are in development to enhance formal notification mechanisms that rely upon existing authorities under NERC’s ROP and to make modifications for the development of emergency CIP standards. The recommended changes are

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<sup>186</sup> *Mandatory Reliability Standards for Critical Infrastructure Protection*, Order No. 706, 122 FERC ¶ 61,040, *reh’g denied*, Order No. 706-A, 123 FERC ¶ 61,174 (2008).

designed to provide a level of due process and technical review, but also provide the necessary speed and confidentiality to address national security concerns.

CIP-focused risk monitoring and mitigation efforts have already resulted in improved ES-ISAC performance and more comprehensive vulnerability reporting. The CIP program has begun a pilot to better leverage industry expertise in the evaluation, validation, and mitigation of security risks. The pilot began in October 2008 and has already engaged industry technical experts in the evaluation of eight cyber vulnerabilities and drafting of the last five ES-ISAC-issued alerts. The pilot has provided valuable expertise and knowledge, directly increasing the quality of ES-ISAC notifications.

Since issuance of Order No. 706 in January 2008, NERC has been working to implement the compliance and enforcement program for the eight new CIP standards. NERC has been preparing to evaluate how these reliability standards will work in practice, monitor industry and technology developments, and determine on an ongoing basis whether these standards should be improved, or new standards should be promulgated.

In response to Order No. 706, NERC formed a new standard drafting team. The drafting team, with augmented NERC staff support, selected a multi-phase approach to enhance and revise the CIP standards. Phase I changes were posted for comment in December 2008, with responses due back early in 2009. These changes (Version 2 CIP standards) were balloted in March 2009, approved by the NERC Board on May 6, 2009, and filed with the Commission for approval on May 22, 2009. Work on Phase II has already begun and will result in more significant revisions which may change some of the philosophical foundations of the standards. These efforts will include a more thorough evaluation of the National Institute of Standards and Technology standards and risk management framework and their applicability to the bulk power system, as specified in PP 232-233 of Order No. 706. The CIP program is providing technical expertise and will assist the drafting team chair and vice chair by being a steward of the requirements set forth in Order No. 706.

The CIP standards differ from traditional reliability standards due to the specific nature of the expertise necessary to align security practices with operational realities. The SAIS program is working with the Compliance Monitoring and Enforcement Program to train staff and develop an efficient capability to assess, investigate, evaluate, and audit compliance with the CIP standards. The first project has been to work with the Training and Education Program to develop an auditor training program for the CIP standards. The initial course pilot has been completed and SAIS is working to support the classes to be offered in November 2009.

As stated, NERC has embarked on a concerted effort to improve its ability to lead CIP efforts for the electricity sector. New NERC efforts in 2009 include performing a cyber risk preparedness evaluation and conducting comprehensive and continuous risk assessments for the bulk power system. The cyber risk preparedness evaluation will focus on investigating the existing capabilities to prevent, detect, respond to, and limit the potential damage of existing/emerging attack techniques with the objective of understanding the preparedness of both individual entities and existing processes/mechanisms to ensure reliability of the bulk power system while under a cyber attack. The cyber risk preparedness evaluation will provide a

benchmark and identify valuable practices and gaps to be addressed. This foundation will be built upon by the introduction of formal and re-occurring assessments of threats facing the bulk power system. NERC, with the guidance of the ESSG, will establish a protocol with DHS, DOE, the Commission, and their Canadian counterparts to ensure comprehensive cyber security threat analysis and risk assessment is available to NERC from a consolidated government voice, with industry users, owners, operators able to participate directly.

To ensure NERC is making decisions and setting priorities on the most current information, NERC will, in consultation with the Commission, organize briefings for the ESSG, the NERC CEO, and senior-level utility executives across all stakeholder groups on cyber security threats. The first of these briefings was held in January 2009 and included United States and Canadian bulk power system top executives. The CSO has undertaken an effort to work with the NERC CIPC to create a program charter for the ES-ISAC for the ESSG to review and consider for approval in the near future. The ESSG has completed its review and is actively engaging and expects to conduct a joint meeting with existing members of the ESCC. In setting a strategic course for the industry, the ESSG will seek guidance and may request input from NERC committees, including the MRC, CIPC, OC, and PC, other industry groups such as trade associations, or other groups such as NIAC, the ISAC Council, the PCIS, or other groups as appropriate to the matter at hand. Additionally, the ES-ISAC is maturing its processes for engaging industry experts to assist in the evaluation of security threats and vulnerabilities. NERC is evaluating technologies to improve the quality, security, and timeliness of ES-ISAC notifications.

The risk assessment program function provides a formal plan and engagement strategy to receive infrastructure protection concerns from government organizations and assemble a landscape of physical and cyber security risks to the bulk power system by assessing threats and hazards. This effort will include the development of a common language to be used by NERC to classify risks to draw the appropriate attention. It will also enhance NERC's ability to evaluate the electricity sector's existing risk management strategies and efforts to address agreed-upon concerns, and add a level of discipline necessary to put specific concerns in context to enable a more strategic approach to managing infrastructure protection risks. The goal will be to have an ongoing process that provides the opportunity for emerging concerns to be evaluated and communicated to the appropriate parties. The process will include an executive-level briefing for the ESSG and other senior managers to outline the concerns, risks, and ongoing efforts.

NERC is developing two new systems that will improve the Cyber Security Alert process, the NERC Secure Alerting and Notification System (NSANS) and HYDRA. HYDRA is a program that identifies and manages security knowledge resources and weaves them into the fabric of the ES-ISAC's business processes and workflows. Together both the content and level of detail obtained via HYDRA, and the target audience delivery, executed via the NSANS application, will be substantially improve the overall Cyber Security Alert process. NSANS and HYDRA are described below.

**NSANS.** NERC has worked with industry stakeholders, the recipients of Alerts, to design and implement NSANS. Leading up to this decision, NERC staff identified where it can address process weaknesses and better communicate and educate registered entities on what



formal notifications are used for, their obligations to acknowledge and respond, how the process works, and how to resolve problems. NERC has conducted two alert Webinars that reached an audience of over 1,500 individuals, and the NERC CSO has made alerts a topic for all interactions with the industry. NSANS will give the ES-ISAC and NERC the power to alert and notify registered entities of the bulk power system, and other utilities in the electricity sector, of vulnerabilities, threats, and/or abnormal events/conditions, or other significant events that may impact the bulk power system. The new alerting platform enables rapid alert creation and dissemination to the electric industry, as well as providing for flexible user controlled account management and permissions to facilitate quick acknowledgement and response from the industry via the combination of a notification engine and a secure web browser portal.

**HYDRA.** The CIP program started a pilot to better leverage industry expertise in the evaluation, validation, and mitigation of security risks. The pilot began in October of 2008 and has already engaged industry technical experts in the evaluation of eight cyber vulnerabilities and drafting of the last five ES-ISAC-issued alerts. The pilot, with an initial subject matter expert pool, has provided valuable expertise and knowledge directly increasing the quality of ES-ISAC notifications. The ES-ISAC processes for engaging experts and evaluating technology vulnerabilities is being matured to achieve consistency and quality. This effort is being called “network Hydra,” which is a program that identifies and manages security knowledge resources and weaves them into the fabric of the ES-ISAC’s business processes and workflows. The ES-ISAC, as a hierarchical organization, must develop focused bridges and touch points into the broad social network of security, technology, and infrastructure experts that exist in our industry.

One of the initial priorities of the CIP program was to work with Event Analysis and NERC’s support organizations to enhance the NERC ROP §810 notification and response process, conduct exercises, provide training for recipients, and employ the process to address security risks. NERC has developed and executed an improvement program that has focused on standardizing, educating, enabling entities to develop processes to meet obligation, and most importantly, demonstrate the use of the process. NERC invested in a dedicated staff member to manage the alert process and work with recipients to address issues and develop a planned approach for implementing improvements.

The Director of National Intelligence worked with NERC and the industry to host a meeting on January 15, 2009 to share information and educate key decision makers on the cyber security challenge. The meeting, which was attended by industry chief executives, included briefings from national security officials and a round-table discussion regarding the cyber threats facing North America. The U.S. Government conducted security vetting and provided special access to participants representing all types of electricity sector organizations from the United States and Canada. The meeting was successful in providing meaningful dialogue about threats we face, sharing our collective insights and perspectives, and starting an ongoing discussion on how we improve our cyber security.

NERC was heavily criticized for its response to one specific cyber security vulnerability in 2007. The effectiveness of the CIP program was rightfully questioned by stakeholders, which has prompted NERC to make a significant commitment to improve the program. NERC’s commitment and initial plan were developed in July 2008 and the plan is now in its execution

phase. NERC has made progress and has already seen improvements in its performance. NERC is committed to actively managing this program area and recognizes, as the ERO, it must be at the forefront of CIP in North America.

**G. Members' Forums**

- 1. NERC will form, and facilitate the activities of, forums for NERC members that serve the interests of members within individual industry sectors and enable members to identify and exchange information on best practices for reliable operations and on performance evaluations, and to disseminate information on lessons learned from operating experience.**

NERC presently has one forum, the Transmission Owners and Operators Forum (Transmission Forum) whose purpose is to improve the reliability and security of the bulk power system by facilitating the pursuit of operational excellence through a forum where transmission owners and operators can identify and exchange information on best practices for reliable operations, evaluate their own performances against those best practices, disseminate lessons learned from disturbances and near misses, and facilitate the utilization of such information in a timely manner, among other things.

NERC forums are financially self-sufficient and therefore do not rely on funds from NERC's assessments. However, the Transmission Forum's charter specifies that the NERC board approve the Transmission Forum's budget. Membership dues received from Transmission Forum members are functionally separated from ERO assessments received from load-serving entities or their designees. To the extent membership dues exceed Transmission Forum expenses in any year, such excess will be held for Transmission Forum use and not used to support NERC activities. The Transmission Forum currently contracts with NERC to provide administrative services and employee benefits, for which the Transmission Forum reimburses NERC.

The Transmission Forum charter was first approved on November 1, 2006. It was revised to broaden opportunity for membership on July 30, 2008. The Transmission Forum's present membership eligibility requirements extend the opportunity to those organizations that own or operate at least 50 circuit miles of transmission lines at 100 kV or greater, or operate a 24/7 transmission control center with NERC-certified transmission or reliability operators, or have an open access transmission tariff or equivalent on file with a regulatory authority. The Transmission Forum presently has over 500 individual participants from among its approximately 50 members including investor-owned, state-authorized, municipal, cooperative, United States federal, and Canadian provincial utilities.

In the short time period since its formation, the Transmission Forum has grown significantly and developed a robust set of programs to benefit its members. The Transmission Forum's organization and current programs are described in the document entitled "The Pursuit of Excellence – Transmission Owners and Operators Forum Organization and Programs." This document, which is available on the NERC Website under "Programs – Transmission Owners and Operators Forum – About the Forum," includes a brief history of the Transmission Forum, its mission, vision, and core values, a description of Transmission Forum's organization and

governance, and descriptions of program activities. Specific achievements and measurables of the Transmission Forum include the following.

1. Practices

The Transmission Forum is writing practices in several areas. Two are complete, and several others are in various stages of drafting:

a. Vegetation Management

- Inspections — V 1.0.0 – Inspection frequency, methods, combining with other maintenance inspections, inspector qualifications and training, data and documentation, communications, and hazard trees. This practice is now in effect.
- Annual Work Plan — V 0.7.3 – Elements of the annual work plan, implementation, adjustments, data, documentation, and an example of a work plan for a line section. The draft is almost complete, and the practice should be ready to implement in 2009.
- Imminent Threat Procedures — V 0.2.1 – Identification, notification, mitigation, and documentation of vegetation that poses an imminent threat to one or more transmission lines.

b. Operator Tool and Environment

- Alarm Tools — V 1.0.0 – Advanced alarm processing techniques, alarm notification, alarm response, and alarm tool monitoring. This practice is now in effect.
- Emergency Tools — V 0.3.0 – Demand side management, standby generation, voltage reduction, rotational load shedding, and emergency communications. The draft is almost complete, and the practice should be ready to implement in the first half of 2009.
- Inter-Control Center Communications Protocol (ICCP) — V 0.3.0 – ICCP system availability, data coordination and quality, data updates and naming conventions, change management and coordination, system management, and dispute resolution. The draft is almost complete, and the practice should be ready to implement in the first half of 2009.
- State Estimator and Contingency Analysis — V 0.2.0 – Availability and solution quality monitoring, support and maintenance, triggering, save case management, external modeling, and solution validation. The draft is in process and should be ready by early summer 2009.

c. Compliance

The development of practices for compliance is in the early stages. Members have focused on sharing experiences and identifying elements to create a “culture of compliance.” The group is developing practices in five areas:

- Evidence — Determine, and document from experience, the best evidence of compliance with requirements of standards. Initial work will begin on the most frequently violated standards and those that are targeted for self-certification in 2009.
- Management — Guidance for senior management support of an internal compliance program.
- Internal Assessment — Procedures to perform an internal assessment/audit process for internal compliance programs, including tools to assess the effectiveness of a program.
- Document Management — Compliance evidence document management, including developing generic guidance on what should be included in the audit binders.
- Industry Experience — Identify items that your company should review and how to pass them along to the correct person. Including the flow of information when advisories are issued by NERC or a Regional Entity.

d. Operator Training and Development

- Systematic Approach to Training (SAT) — Objectives of the systematic approach to training and the various elements. An initial “living document” has been developed and is being implemented by the Forum members. This document will continue to evolve as experience is gained.
- Training Delivery — On the Job Training (OJT), e-learning, training simulators, classroom training, and drills. An initial draft of some areas has been developed and the practices should be ready to implement by late summer 2009.
- Management Support — Management’s commitment to training and supporting the SAT process, documented training management structure, training resources, development hours, and budget. An initial draft of some areas has been developed and the practices should be ready to implement by late summer 2009.
- Recordkeeping and Administration — Identify the requirements and practices associated with NERC personnel standards (PER) and continuing education program requirements. An initial draft of some areas has been developed and the practices should be ready to implement by late summer 2009.

2. Information Exchange

- The Forum’s members post internal system and equipment event reports and equipment alerts on a Web portal. They also post their own practices, procedures, and programs for sharing with other Forum members. For example, most Forum members have posted their Transmission Vegetation Management Programs.

- The Forum's groups meet via the Internet each month, and held two workshops (vegetation management and compliance practices) during 2008.
- The Forum also conducted 14 surveys ranging from vegetation management practices to relay protection maintenance to FAA marker requirements.

3. Peer Reviews

- The Forum conducted its first peer review in 2008, and plans at least three in 2009. These reviews are not compliance audits, nor readiness evaluations. Instead, they bring Forum experts together from the practices groups to compare and share practices and lessons learned. The Forum's first review spanned three days, and the 14-member review team presented its recommendations confidentially to the "peer host," and brought back to the Forum the superior practices it learned.
- The Forum has just hired a peer review program manager, and plans to conduct at least three reviews in 2009.

4. Metrics Program

The Forum's Metrics Working Group set the stage for moving the Forum's spreadsheet-based metrics pilot to an online (Web-based) database for the Metrics program. The Forum will use the same "engine" as the NERC TADS, but the Forum will collect secondary cause codes as well, thus digging deeper in the "risk events" that occur on the transmission system. The Forum will also collect metrics on intentional forced outages, control system (EMS and SCADA) interruptions, operating limit violations, and vegetation contacts. The value added for the Forum members is quite profound. The Forum members' metrics information will be available to all other Forum members, allowing them to compare their equipment performance with their peers. The Forum members will also be able to perform their own statistical analysis, set benchmarks and objectives, and measure improvements.

The Transmission Forum presently employs four people in carrying out these program activities.

**APPENDIX A**

**TO**

**ATTACHMENT 1**

**ANALYSIS OF DURATION OF  
STANDARDS DEVELOPMENT PROJECTS**

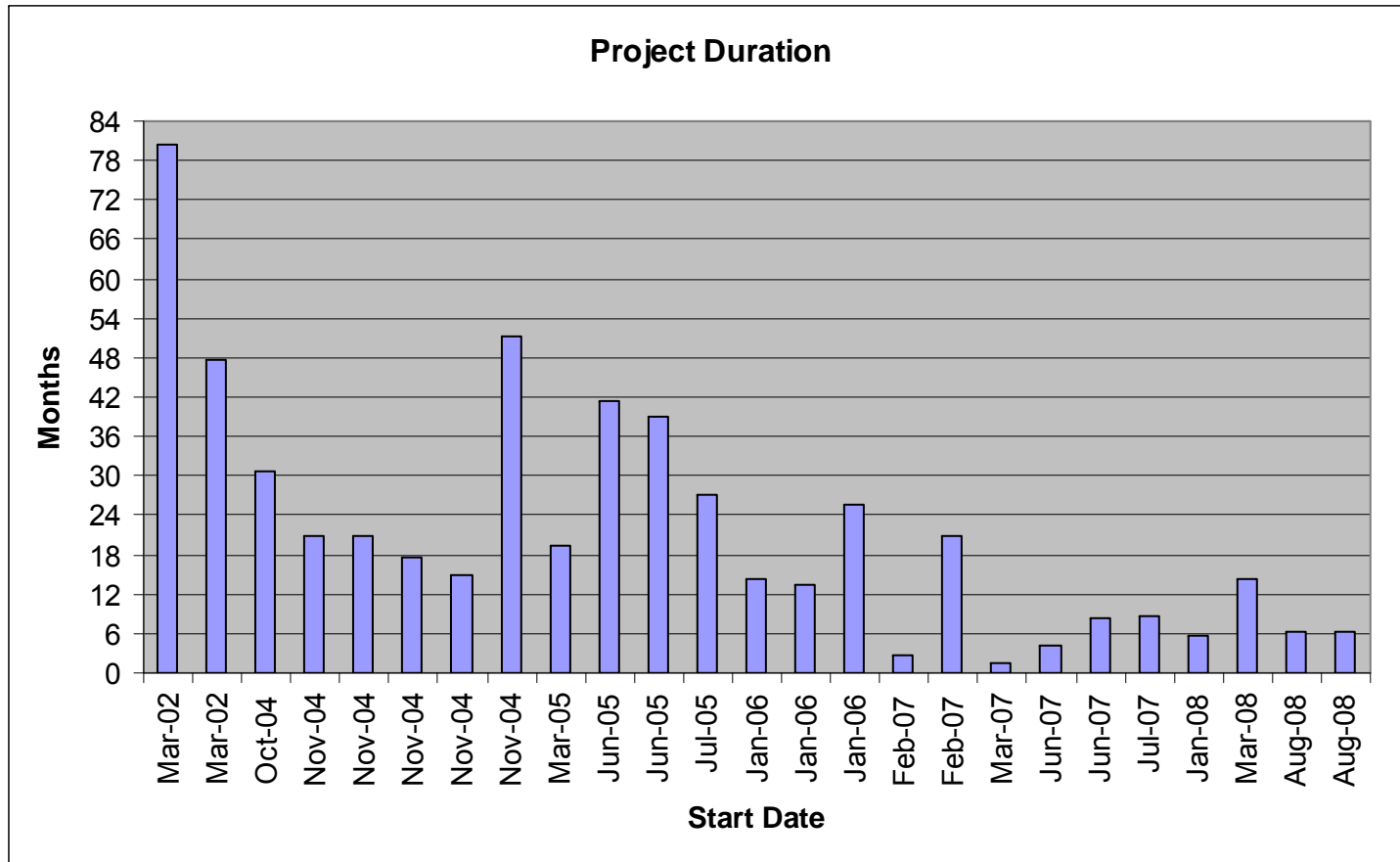
**JANUARY 2002 – MAY 2009**

**JULY 20, 2009**

# Standards Project Durations

## Project Duration Summary – Completed Projects

The tables below provide summary duration statistics for NERC standards projects completed between January 1, 2002 and May 31, 2009. In that period, NERC completed 25 full or sub-parts of projects (“projects”), each including one or more standards items: new standards, revised standards, or standards elements. (Requests for interpretation are not included.) The average project duration from the initial Standard Authorization Request (“SAR”) to NERC Board of Trustees adoption is 21.7 months. The shortened durations for the more recent projects are largely due to urgent action items.



Average	Maximum	Minimum	Median
21.7	80.5	1.6	17.7

## Project Duration Details

The tables below provide duration details on NERC standards projects since January 1, 2002 (updated through May 31, 2009). In that period, NERC worked on 62 full or sub-parts of projects (“projects”), each including one to many standards items: new standards, revised standards, or standards elements. (Requests for interpretation are not included.) Twenty five projects were completed (successful adoption of standards by the NERC Board of Trustees). A number of projects are still in progress, while others were delayed or halted for various reasons, including industry rejection via balloting.

	<b>Projects</b>
Total	62
Completed	25
In progress	29
Failed Ballot	3
Withdrawn	3
Deferred/on hold	2

Project	Initial SAR	ERO Adoption	Months	Work Plan Estimate <sup>1</sup>	Comments
<b>Projects initiated prior to 2006 and not assigned a project number</b>					
Balance Resources and Demand Standards (no project number)	January 1, 2002	Ballot failed April 2007		N/A	Work carried forward into Project 2007-18
Certification of RC Certification of TOP Certification of BA (No project number)	December, 2002	SAR withdrawn November 2007		N/A	Certification process now within scope of Compliance and Certification Committee
Determine Facility Ratings, Operating Limits, and Transfer Capabilities	March 7, 2002	February 7, 2006	47.8	N/A	Long delays for Version 0 clean-up, development of compliance elements, staff resource support, and in clarifying Commission directives
IROL Standards – IRO-008, IRO-009, IRO-010 (no project number)	March 7, 2002	October 17, 2008	80.5	N/A	Long delays for Version 0 clean-up, development of compliance elements, staff resource support, and delays in approval of FAC-010 and FAC-011 (related standards)
Missing Measures and Compliance Elements	March 30, 2005	November 1, 2006	19.4	N/A	Completed per schedule



Project	Initial SAR	ERO Adoption	Months	Work Plan Estimate <sup>1</sup>	Comments
Nuclear Power Interface Coordination Standard (no project number)	October 24, 2004	May 2, 2007	30.7	N/A	Delayed to solve problem of identifying responsible entities.
Phase III & IV Standards	November 17, 2004	August 2, 2006	20.8		Generator Verification field test results rolled into and being developed in Project 2007-09
<i>Phase III &amp; IV Standards - Set 1, Part 1</i>	<i>November 17, 2004</i>	<i>February 7, 2006</i>	<i>14.9</i>		<i>MOD-024-1, MOD-025-1, PRC-003-1, PRC-004-1, PRC-005-1, PRC-020-1, PRC-021-1, PRC-022-1</i>
<i>Phase III &amp; IV Standards - Set 1, Part 2</i>	<i>November 17, 2004</i>	<i>August 2, 2006</i>	<i>20.8</i>		<i>PRC-002-1 and PRC-018</i>
<i>Phase III &amp; IV Standards - Set 2, Part 1</i>	<i>November 17, 2004</i>	<i>May 2, 2006</i>	<i>17.7</i>		<i>EOP-005-1, MOD-013-1, MOD-016-1</i>
<i>Phase III &amp; IV Standards - Set 2, Part 2</i>	<i>November 17, 2004</i>	<i>August 2, 2006</i>	<i>20.8</i>		<i>VAR-001-1, VAR-002-1, TOP-002-1</i>
Resource Adequacy	November 11, 2004	Deferred until 2009 as Project 2009-05.		24	Delayed while determining best approach to conduct assessment and to address higher priority projects.
Revise Standards Process to Include Cost Benefit Analysis – FRCC	October 2005	Withdrawn in June 2007			Unplanned.
<b>Projects initiated in 2006 or carried into initial long-range work plan from prior years</b>					
V0 Risk Factors (no project number)	January 5, 2006	February 13, 2007	13.5	N/A	Stakeholders rejected “single ballot” for all Version 0 and Version 1 VRFs - subdividing and conducting new ballot delayed completion
V1 Risk Factors (no project number)	January 5, 2006	March 12, 2007	14.4	N/A	Stakeholders rejected “single ballot” for all Version 0 and Version 1 VRFs - subdividing and conducting new ballot delayed completion
PRC-023-1 – Transmission Relay Loadability (no project number)	January 9, 2006	February 12, 2008	25.5	N/A	More postings required than anticipated – project delayed to consider Commission’s concerns in 2007
Project 2006-01 – System Personnel Training – PER-005-1	November 30, 2004	February 10, 2009	51.1	33*	Delays acquiring staff, changes to drafting team leadership and members, changes to the standards process, and response to new FERC directives impacted deliverable schedule.
Project 2006-02 — Assess Transmission Future Needs	March 6, 2002 May 1, 2004	[In Progress]	[61]	36*	Long delays for Version 0 clean-up and for acquiring staff resource support – restarted after two-year delay.

Project	Initial SAR	ERO Adoption	Months	Work Plan Estimate <sup>1</sup>	Comments
Project 2006-03 — System Restoration and Blackstart	October 26, 2006	August 2009 (anticipated)	[32]	30	Original project schedule optimistic that only two postings were needed. Five postings were conducted.
Project 2006-04 — Backup Facilities	October 26, 2006	[In Progress]	[32]	33	Original project schedule optimistic that only two postings were needed. Three postings were conducted and estimate updated to reflect need.
Project 2006-06 — Reliability Coordination	December 18, 2006	[In Progress]	[29]	30	Project delayed to address removal of requirements from standards to certification process. Otherwise, near expected schedule.
Project 2006-07 – ATC et al Standards – MOD-001, MOD-008, MOD-028 through MOD-030, MOD-004	June, 2005	November 2008	41	24*	Long delays due to staff changes, project scope expansion, drafting team changes, and responding to many new Commission directives issued while project underway.
<i>Project 2006-07a</i>	<i>June 16, 2005</i>	<i>August 26, 2008</i>	<i>38.9</i>		<i>MOD-001_8_28_29_30v1</i>
<i>Project 2006-07b</i>	<i>June 16, 2005</i>	<i>November 13, 2008</i>	<i>41.5</i>		<i>MOD-004-1 CBM</i>
Project 2006-07 – ATC MOD-030-2	August 8, 2008	February 10, 2009	6.2		MOD-030-2 Flowgate Methodology
Project 2006-08 – IRO-006-4 – Reliability Coordination – Transmission Loading Relief	July 14, 2005	[In Progress]	[46]	30*	Project scope expanded and broken into phases – first phase complete in 2007
<i>Project 2006-08a</i>	<i>July 14, 2005</i>	<i>October 9, 2007</i>	<i>27.2</i>		<i>IRO-006-4</i>
<i>Project 2006-08b</i>	<i>July 14, 2005</i>	[In Progress]			<i>IRO-006-5 and IRO-006-EAST-1</i>
Project 2006-09 – FAC-008-2 – Facility Ratings	December 18, 2006	Failed ballot in December 2008	24	18	Delays due to need for clarity on responding to FERC directives; FAC-008-2 failed.
Refine Applicability in Approved Standards – FRCC	June 2006	Withdrawn in June 2007			Unplanned. Need for SAR replaced by detailed project plans in 3-year work plan.
<b>Projects initiated in late 2006, in 2007, or carried into initial long-range work plan from prior years – assigned a project number starting with “2007”</b>					
Project 2007-01 — Underfrequency Load Shedding	November 14, 2006	[In Progress]	[30]	33	Original project schedule optimistic that only two postings were needed (three postings expected). Also dealing with issue on applicability to other than Regional Entity. Project coordinator swapped in mid-project due to change in assignments. Schedule adjusted accordingly.

Project	Initial SAR	ERO Adoption	Months	Work Plan Estimate <sup>1</sup>	Comments
Project 2007-02 — Operating Personnel Communications Protocols	March 1, 2007	[In Progress]	[26]	30	Significant delays in preparing initial draft relative to defined scope; expect in late 2010.
Project 2007-03 — Real-time Operations	March 15, 2007	[In Progress]	[26]	30	Delays encountered to address removal of requirements during consolidation; expect late 2009/early 2010
Project 2007-04 — Certifying System Operators	July 11, 2007	[In Progress]	[23]	27	Project slightly behind schedule to address Commission staff concerns.
Project 2007-05 — Balancing Authority Controls	June 20, 2007	[In Progress]	[23]	36	Project not active after SAR was presented due to lack of staff resources to assign for coordinator support. Coordinator working on ATC project as top priority. First posting anticipated by year end.
Project 2007-06 — System Protection Coordination	May 7, 2007	[In Progress]	[24]	42	Project on or ahead of schedule due to diminished scope in initial phase. Subsequent projects to deal with generation – transmission coordination issues.
Project 2007-07 — Vegetation Management Revisions	January 9, 2007	[In Progress]	[29]	27	Significant delays in preparing initial draft relative to defined scope and to provide technical justification for team positions; expect in early 2010.
Project 2007-09 — Generator Verification	April 3, 2007	[In Progress]	[25]	33	Significant delays in preparing initial draft relative to defined scope and to provide technical justification for team positions; expect in mid-2010.
<i>Project 2007-09a</i>	<i>April 3, 2007</i>				<i>PRC-024 and MOD-026</i>
<i>Project 2007-09b</i>	<i>April 3, 2007</i>				<i>MOD-024 and MOD-025</i>
<i>Project 2007-09c</i>	<i>April 3, 2007</i>				<i>MOD-027</i>
<i>Project 2007-09d</i>	<i>April 3, 2007</i>				<i>PRC-019</i>
Project 2007-11 — Disturbance Monitoring	March 1, 2007	[In Progress]	[26]	36	Additional technical study work needed to better define standard requirements; expect delivery in mid-2010
Project 2007-12 - Frequency Response	April 7, 2004	Project on hold	[61]	30*	Project is presently on hold. Delayed to determine what data are needed to analyze current situation and the best mechanism to collect the data. The SAR/standard is being replaced with a "data request" to be issued by NERC. The SAR/standard is being re-evaluated.
Project 2007-14 – Changes to CI Timing Tables	February 2007	October 29, 2008	20.8	18	Completed on target

Project	Initial SAR	ERO Adoption	Months	Work Plan Estimate <sup>1</sup>	Comments
<i>Project 2007-14a – Urgent Action – Changes to CI Timing Tables</i>	<i>February 7, 2007</i>	<i>May 2, 2007</i>	<i>2.8</i>		<i>Urgent Action SAR</i>
<i>Project 2007-14b – Permanent Changes to CI Timing Tables</i>	<i>February 13, 2007</i>	<i>October 29, 2008</i>	<i>20.8</i>		<i>Permanent Changes completed with 100% approval during initial ballot.</i>
Project 2007-17 — Protection System Maintenance & Testing	May 7, 2007	[In Progress]	[24]	36	Delay in project commencement due to lack of staff coordinator resources. Schedule still close to target.
Project 2007-18 — Reliability-based Control	May 3, 2007	[In Progress]	[24]	42	Project is currently under field test and is currently on track for completion.
Project 2007-19 – Urgent Action Removal of WECC Waiver from INT-001 and INT-004	June 4, 2007	October 9, 2007	4.2	N/A	Unplanned. Urgent action.
Project 2007-21– Supplemental Version 1 Violation Risk Factors	March 15, 2007	May 2, 2007	1.6	N/A	Unplanned. Urgent action.
Project 2007-23 – Replace Levels of Noncompliance with VSLs	June 27, 2007	[In Progress]	[23]	N/A	Unplanned.
<i>Project 2007-23a – Replace Levels of Noncompliance with VSLs</i>	<i>June 27, 2007</i>	<i>February 28, 2008</i>	<i>8.2</i>		<i>Industry approved eight of nine ballots; all nine were filed with FERC</i>
<i>Project 2007-23b – Replace Levels of Noncompliance with VSLs</i>	<i>June 19, 2008<sup>2</sup></i>	<i>[In Progress]</i>	<i>[12]</i>		<i>Part 2: to address FERC VSL order; to be filed September 2009</i>
Urgent Action – Changes to BAL-004-0 for OC (no project number)	July 11, 2007	March 26, 2008	8.6	N/A	Unplanned. Urgent action.
<b>Projects initiated in 2008</b>					
Project 2008-04 – FAC-010, FAC-011, FAC-014 – Order 705	January 1, 2008	June 24, 2008	5.8	N/A	Unplanned. FAC-010-2, FAC-011-2, FAC-014-2
Project 2008-05 — Credible Multiple Element Contingencies (FAC-011-2)	November 3, 2007	[In Progress]	[11]	15	SAR was revised on August 7, 2008. TPL project team to consider issue in lieu of separate project. Activity ceased in 4Q08.

Project	Initial SAR	ERO Adoption	Months	Work Plan Estimate <sup>1</sup>	Comments
Project 2008-06 — Cyber Security – Order 706	March 1, 2008	May 6, 2009	14.4	24	Phase 1 completed on time; team working on Phase II changes
Project 2008-08 — EOP VSL Revisions	March 26, 2008	[In Progress]	[14]	12	VSLs considered as part of comprehensive VSL filing; extension granted to September 2009.
Project 2008-12 — Coordinate Interchange Standards	May 27, 2008	[In Progress]	[12]	N/A	Will be a multi-part project. Estimate not included in latest development plan.
Project 2008-14 — Cyber Security Violation Severity Levels Revisions	November 3, 2008	[In Progress]	[8]	8	SAR was revised on March 13, 2009.
Project 2008-16 — Transmission Operations Violation Severity Levels (TOP-004-2)	August 8, 2008	February 10, 2009	6.2	N/A	Unplanned
<b>Projects initiated in 2009</b>					
Project 2009-01 – Disturbance and Sabotage Reporting	April 2009	[In Progress]	[1]	N/A	Project schedule to be developed after scope is defined in SAR.
Project 2009-06 – Facility Ratings	January 2009	[In Progress]	[4]	N/A	Unplanned
Project 2009-07 - Reliability of Protection Systems	January 2009	[In Progress]	[4]	N/A	Unplanned
Project 2009-08 – Nuclear Plant Interface Coordination	February 2009	[In Progress]	[3]	N/A	Unplanned – schedule to complete in August 2009.
Project 2009-18 – Withdraw of Three MISO Waivers	April 2009	[In Progress]	[1]	N/A	Unplanned
Order 706B Nuclear Implementation Plan	May 2009	[In Progress]	[0]	N/A	Unplanned – filing obligation in September 2009.

<sup>1</sup> Development plan timeline reflects estimates to complete project when the plan was updated in October 2008.

<sup>2</sup> FERC VSL Order

\* Projects commenced prior to initial 2007-2009 development plan estimate and estimate reflects remaining work expected.

**APPENDIX B**

**TO**

**ATTACHMENT 1**

**ANALYSIS OF  
STANDARDS BALLOT RESULTS**

**JULY 2006 – MAY 2009**

**JULY 20, 2009**

## Voting Statistics (Industry Participation)

The tables below include a summary of final ballot statistics for participation and voting during the period from July 20, 2006 through May 31, 2009. The ballot events are segmented into two categories: 1) standards (new standards, modified standards, or standards elements) – averaging 80.85% approval with three failed ballots, and 2) interpretations of standards – averaging 93.14% approval with no failed ballots<sup>1</sup>. A summary of the stated reasons for the rejected ballots follows the tables.

### Approved Standards: New Standards, Modified Standards, Standards Elements

Final Approved Ballot Events	48
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	Ballot Pool Size	Total # of Votes	Quorum	Weighted Segment Approval
Average	217	199	91.65	82.26
Median	211	200	91.55	81.92
Minimum	111	88	78.57	67.79
Maximum	284	272	97.45	100.00

### Approved Interpretations of Standards

Final Ballot Events	13
Approved	13
Rejected	0

	Ballot Pool Size	Total # of Votes	Quorum	Weighted Segment Approval
Average	204	184	90.14	93.14
Median	210	184	89.67	96.26
Minimum	153	134	83.57	78.31
Maximum	243	221	98.69	99.12

<sup>1</sup> Although no final ballots of interpretations failed, there were several instances in which the initial ballot did not achieve a two-thirds weighted segment approval. In these instances, the response team re-convened to revise the response and then successfully proceeded through the ballot process.

## Failed Standards: New Standards, Modified Standards, Standards Elements

Final Approved Ballot Events	3
------------------------------	---

	Ballot Pool Size	Total # of Votes	Quorum	Weighted Segment Approval
Average	221	209	94.57	58.21
Median	223	213	95.24	57.37
Minimum	210	200	93.04	57.30
Maximum	230	214	95.52	59.95

### Summary of Reasons for Negative Votes for Rejected Ballot Events:

#### 1. Balance Resources and Demand standards (BAL-007 through BAL-011):

Comments submitted with the negative ballots cited a variety of process-related as well as technical reasons, including the following:

- a. All regions did not participate in the field test.
- b. The proposed standards would lead to an increase in violations of interconnected reliability operating limits (“IROLs”).
- c. The new standards would result in “dragging” on the system.
- d. “Time horizons” should not be included in the standards since the latest approved version of the *Reliability Standards Development Procedure* does not include a discussion of time horizons.
- e. Assigning a requirement to NERC would lead to a standard that is not enforceable.
- f. The field test had led to an increase in the number of transmission loading relief (“TLR”) activations.

Ballot Pool Size	Total # of Votes	Quorum	Weighted Segment Approval
223	213	95.52	57.30

#### 2. VSLs for Emergency Operations Standards: Examples of the reasons for negative ballot are below (statistics are from the initial ballot; some balloters changed votes their votes between initial and final ballots):

Reasons Cited for Negative Vote	Number of Balloters Citing Reason
VSL is incorrect	15
Double jeopardy	20
Use of generic language in text of VSLs	20



Failure to apply VSL guidelines consistently	4
Failure to consider risk in setting VSLs	1
Failure to comply with the standards process	6
Disagreement with criteria in VSL guidelines	4
Errata	5

Ballot Pool Size	Total # of Votes	Quorum	Weighted Segment Approval
210	200	95.24	59.95

3. **FAC-008-2 — Facility Ratings:** The primary reason for rejecting the ballot was Requirement R7, which was developed to address the following directive - to identify, for critical facilities, the limiting component and the theoretical increase in rating if that component were no longer limiting. Most balloters stated the requirement was not needed for reliability purposes and indicated the issue would be more efficiently and appropriately addressed in the transmission tariff and regional transmission organization (“RTO”) market processes.

Ballot Pool Size	Total # of Votes	Quorum	Weighted Segment Approval
230	214	93.04	57.37

**FEDERAL ENERGY REGULATORY COMMISSION  
DOCKET NO. RR09-\_\_\_**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

**ATTACHMENT 2**

**TO**

**THREE-YEAR  
ELECTRIC RELIABILITY ORGANIZATION  
PERFORMANCE ASSESSMENT REPORT**

**STAKEHOLDER AND REGIONAL ENTITY**

**COMMENTS AND RECOMMENDATIONS**

**NERC DISCUSSION OF COMMENTS AND RECOMMENDATIONS**

**AND SPECIFIC NERC ACTIONS**

**July 20, 2009**

**Attachment 2  
To  
NERC Three-Year ERO Performance Assessment Report**

This Attachment 2 summarizes comments and recommendations<sup>1</sup> from Regional Entities and other interested entities for improvement of NERC’s operations, activities, oversight, and procedures in each of its principal program areas, and provides NERC’s responses to these comments and recommendations as well as specific actions NERC plans to take or is taking in response to these comments and recommendations.

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<sup>1</sup> Includes (1) comments and recommendations submitted in response to the initial stakeholder survey and initial comments and recommendations from the Regional Entities (“Round 1 Comments”); and (2) written comments and recommendations submitted prior to the May 5, 2009 Member Representatives Committee meeting, oral comments made at that meeting, Regional Entity recommendations in the May 14, 2009 draft “Joint Regional Entity Self-Assessment,” oral comments and recommendations made at the May 19, 2009 workshop, and written comments submitted in response to the April 27, 2009 and May 15, 2009 postings of the draft three-year assessment report (collectively “Round 2 Comments”).

## A. Reliability Standards Development

### 1. *Focus existing reliability standards and reliability standards development on areas that will lead to the greatest improvement in bulk power system reliability.*

Stakeholders offered a number of comments regarding the large number of reliability standards that exist and are under development by NERC. Three fundamental stakeholder recommendations emerge from these comments: (1) focus the development of new reliability standards on those that will lead to the greatest improvement in reliability; i.e., address the greatest risks of wide-area cascading outages; (2) reduce the number of existing reliability standards to just those that have a critical impact on reliability of the bulk power system and convert the remaining reliability standards to guidelines; and (3) develop a more systematic process for prioritizing new reliability standards development projects based on risks to the bulk power system.

Commenters indicated that the number of reliability standards projects currently underway is overwhelming the ability of many stakeholders to participate on reliability standards drafting teams and comment on and ballot proposed reliability standards. Commenters noted that this also causes delay in the development of reliability standards due to the demands on industry volunteers to serve on standard drafting teams. Finally, commenters stated that everything cannot be a priority and that we need to prioritize work on just those reliability standards that will yield the biggest benefits to bulk power system reliability. Round 2 commenters generally agreed with the specific NERC actions listed below.

Regional Entities commented that NERC should, on a priority basis, finalize its performance requirements necessary for the development of the Regional fill-in-the-blank reliability standards so Regional Entities may expedite completion of any necessary Regional reliability standards. Regional Entities added NERC should prioritize its reliability standards development activity and compliance review by focusing on those standards that are performance-based, rather than documentation-based, and have the greatest potential to mitigate risk to reliability, and consider reformulating less critical standards into guides or technical references.

Regional Entities also commented that there is a benefit to developing stronger linkages between reliability assessments, compliance, and reliability standards development. These benefits include a better understanding of compliance requirements and addressing emerging issues that may require accommodation in future reliability standards (e.g., issues identified in long term assessments).

#### Discussion of Comments

NERC currently has 28 active reliability standards development projects and eight interpretations of existing reliability standards underway, not counting reliability standards in the balloting or field test stage, or those pending regulatory filing. Most of these reliability standards projects were initiated to: (i) clean up and clarify language in the original Version 0 Reliability Standards for compliance monitoring purposes, or (ii) address directives in FERC orders on reliability

standards submitted by NERC for approval. FERC issued a number of directives in Order No. 693 that it believes are necessary to bring NERC's reliability standards up to the level necessary to provide for an Adequate Level of Reliability. A significant number of the current reliability standards projects are aimed at addressing these directives. Very few of the current reliability standards projects address new, high priority reliability issues that were driven by findings from the event analysis or compliance programs.

NERC remains committed to developing reliability standards that deliver an Adequate Level of Reliability. NERC's three-year Reliability Standards Development Plan serves as the foundation upon which reliability standards development efforts are undertaken. The primary reason for developing the annual 3-year Reliability Standards Development Plan is in fact to prioritize reliability standards development activity, both new reliability standards and revisions to existing reliability standards. The initial 3-year plan was developed in 2006 and has been updated annually since then. The plan is the management tool that guides, prioritizes, and coordinates revision or retirement of existing reliability standards and the development of new reliability standards. The initial plan was focused primarily on making modifications to NERC's initial set of Version 0 Reliability Standards. Starting in 2007, the plan's focus was expanded to begin identifying more proactively those projects needed to fill reliability gaps. While the initial plan was developed by the Standards Program staff, beginning in 2007 a concerted effort was undertaken to reach out not only to all the program areas within NERC, but to NERC's technical committees and industry groups, seeking input on the identification of the need for new or revised reliability standards.

The plan objectives include:

- Addressing remaining recommendations resulting from the investigation of the August 14, 2003 blackout that called for new or revised reliability standards.
- Addressing comments from industry, FERC, and others suggesting improvements to each reliability standard, including those comments received from industry stakeholders during public comment periods.
- Addressing quality issues to ensure each reliability standard has a clear statement of purpose, and has outcome-focused requirements that are clear and measurable.
- Ensuring measures and compliance elements are aligned to support the requirements within the reliability standards and follow definitions outlined in the reliability standards template.
- Reorganizing the reliability standards more logically based on topic and removing redundancies.
- Eliminating requirements that do not have an impact on bulk power system reliability; retiring redundant requirements; retiring or converting (into guidelines) lower-level "facilitating" requirements that are already measured through compliance with higher-level requirements; and moving basic "capability" requirements that are routinely used to the certification processes.
- Addressing other pending proposals for new reliability standards.
- Improving reliability standard requirements by incorporating approved interpretations.
- Incorporating feedback from other NERC program areas such as compliance monitoring and enforcement, reliability assessments, and event analysis.

- Identifying less well-defined issues (“variables”) that could lead to reliability standard development activities in the Reliability Standards Development Plan timeframe.
- Satisfying the requirement for a five-year review of all reliability standards.
- Addressing the “fill-in-the-blank” reliability standards.

The NERC Standards Committee, comprising industry representatives, assists NERC staff in prioritizing the projects that are included in the Reliability Standards Development Plan, which is ultimately approved by the NERC board. The Standards Committee also makes a determination on whether to accept each new Standard Authorization Request (SAR) that is proposed. Under the existing Reliability Standards Development Procedure, NERC staff does not have the authority to “reject” a SAR for a proposed project; this authority rests with the Standards Committee. The Standards Committee’s Process Subcommittee has a task force that is currently working to identify a “filter” for use in determining whether a proposed SAR should be accepted for development.

NERC continues to believe the Reliability Standards Development Plan is the appropriate vehicle to focus and prioritize its reliability standards development activities. While there has been significant input received from regulatory authorities regarding improvements to reliability standards, there has not been commensurate input provided from the stakeholder community when presented with opportunities for input into the annual update of the Reliability Standards Development Plan. Furthermore, there has been reluctance expressed by Commission staff regarding proposals to remove “facilitating” requirements (such as the requirement to provide continuous monitoring) from the reliability standards that were approved in previous Orders, or to move basic “capability” requirements (such as the requirement to have monitoring capability) from the body of a reliability standard into the Organization Registration and Certification process.

Taken in the aggregate, the stakeholder comments suggest a need for NERC to embark on a program to review all existing, FERC-approved reliability standards to: (i) eliminate reliability standards that are not essential to the reliability of the bulk power system (e.g., needed to prevent cascading outages); (ii) reduce “less significant” reliability standards to a lesser category, such as operating guides, policies or criteria; and (iii) remove documentation-related requirements from the requirements of reliability standards that can be violated, and make them instead compliance measures or some other component of the reliability standards that is not subject to findings of violation and imposition of penalties. NERC agrees this is a worthwhile endeavor, and has identified a number of specific NERC actions to address this issue.

NERC has also developed specific initiatives to identify possible “high impact” reliability standard development projects that may have significant impact on the reliability of the bulk power system. For example, NERC has developed a broad-based reliability initiative that addresses lessons learned from event analysis activities in the area of system protection and control. This initiative identifies a compendium of system protection and control issues that have contributed to many system events. The analysis of these events is providing the technical foundation for new reliability standards development activities. These projects focus efforts on issues that have been known to cause bulk power system events and are therefore directly related to the improvement of reliability. Further, information from this initiative can be used to

evaluate which reliability standards and standards requirements are most critical to bulk power system reliability.

Another source of “high impact” reliability standards development and modification projects is NERC’s ongoing efforts to address the issues raised by Commission Order No. 706, namely the modification of Critical Infrastructure Protection (CIP) reliability standards to protect the electricity sector critical infrastructure from malicious cyber attack. NERC’s multi-phase project to implement changes to the CIP reliability standards includes a thorough evaluation of the National Institute of Standards and Technology’s (NIST) framework to identify improvements to protecting critical assets on the grid.

Specific NERC Actions

- a. Continue to utilize the annual Reliability Standards Development Plan to prioritize and guide reliability standards development activities.
- b. Continue outreach efforts to obtain feedback from industry stakeholders as well as from the NERC program areas, especially compliance monitoring and enforcement, reliability assessment and performance analysis, and event analysis, for use as input into the 2010–2012 version of the Reliability Standards Development Plan, which is to be considered for approval by the board in November 2009, and in subsequent versions of the Development Plan.
- c. Complete the Standards Committee activity to identify administrative requirements in the current set of reliability standards and provide these as input (as candidates to be removed from the reliability standards) to the 2010–2012 version of the Reliability Standards Development Plan.
- d. Develop and begin implementing a plan that includes engagement of the regulatory authorities to convert the existing set of reliability standards and requirements to a smaller set of critical performance-based reliability standards. [Ongoing]
- e. Develop a list of all outstanding FERC reliability standards directives and a prioritization process for reliability standards development that strikes a balance between regulatory directives, industry input, and feedback on reliability performance from the event analysis, reliability assessment, and compliance programs. [by December 31, 2009]
- f. Continue to use more broad-based initiative approaches, like the System Protection Initiative and NERC’s efforts to address in reliability standards development the issues identified by the Commission in Order No. 706 to protect the critical electric infrastructure from malicious cyber attack, to identify and address requirements for improving bulk power system reliability that would be pursued in projects to develop new or revised reliability standards. [Ongoing]
- g. Conduct a technical conference with invited subject matter experts to assess conformance of existing reliability standards to the stated reliability principles and to the definition of Adequate Level of Reliability [by June 30, 2010].

## 2. *Accelerate the reliability standards development process.*

Stakeholders commented that the reliability standards development process, including the process for developing reliability standards interpretations, needs to be made more timely and efficient. At the same time, however, comments also acknowledged the continuing need for adequate opportunity for stakeholder input and participation in order to develop high-quality, technically sound reliability standards. Stakeholder suggestions included reducing comment periods, instituting a more well-structured project management process and effective project management, and closer adherence to the published Reliability Standards Development Plan.

Stakeholders also commented that NERC's Reliability Standards Development Procedure as it currently exists requires substantial time to implement. As it is currently applied, the procedure is seen as a "one size fits all" process, whether dealing with a new reliability standard addressing a new topic, a change to one requirement in an existing reliability standard, or responding to a request for interpretation.

### Discussion of Comments

NERC continues to press forward to best utilize the industry's technical expertise and resources in developing reliability standards. The commenters acknowledge the balance that is required and desired between expediency of the effort and the quality of the product. NERC acknowledges that its reliability standards development process is applied as a "one size fits all" process for any reliability standard change, whether that be a new reliability standard addressing a new topic or a change to one requirement in an existing reliability standard. NERC agrees that it and the industry need to revisit their thinking regarding the treatment of SARs to recognize that different and more effective approaches may be possible for modifying or creating reliability standards depending on the nature of the SAR.

Additionally, the current construct for responding to requests for formal interpretation requires two separate and distinct development activities: one to respond to the interpretation itself, which includes assembling a team through balloting, followed by a second activity to modify the reliability standard to incorporate the interpretation. With the support of industry stakeholders, NERC could implement a new or modified development process to address narrowly-defined standard changes such as those that result from interpretations. This proposed process would not "require" the full existing reliability standards development process to be implemented, would be more efficient, and would not sacrifice quality.

Further, NERC acknowledges the length of time it takes to complete the projects in the Reliability Standards Development Plan and agrees with commenters that enhanced project management skills by the team leaders and NERC staff coordinator would to some extent mitigate this concern. This effort is collaborative and the standard drafting team must be prepared to commit to a realistic schedule and actively work to meet it. The Standards Process Subcommittee of the Standards Committee is actively engaged in reviewing ways to improve the overall reliability standards development process, including changes to expedite reliability standards development. However, the Reliability Standards Development Procedure as it currently exists requires substantial time to implement; significant reductions in the time needed



to complete a project cannot be expected without fundamental structural changes to the procedure.

A number of Round 2 commenters disagreed with NERC's initial suggestion (in the April 27, 2009 draft) to not require a recirculation ballot if the initial ballot received an 85 percent approval threshold even though negative ballots included comments on the proposed standard. Commenters acknowledged that this would make the balloting time shorter but does not provide significant improvements to the standards time-line. The benefit of the re-ballot is to provide entities with the opportunity to see the negative comments and determine if they have identical concerns which they did not originally consider. In the end the product produced through the existing process is better because it gives stakeholders the opportunity to review, and if necessary, change their ballots. Similarly, Round 2 commenters disagreed with the initial suggestion to require negative ballots to include comments in support of the negative vote. Based on these Round 2 comments, NERC has deleted these actions from the specific NERC actions list.

Implementing the specific NERC actions below will add flexibility to the reliability standards development process that will allow reliability standards and interpretations to be developed and approved more quickly and reduce the resource requirements on NERC and the industry.

Most of the specific NERC actions listed below aimed at expediting reliability standards development will require formal changes to the Reliability Standards Development Procedure. The board will direct the Standards Committee and its Standards Process Subcommittee to consider these suggested actions and develop proposed changes to the Reliability Standards Development Procedure to incorporate them.

#### Specific NERC Actions

- a. SARs
  - i. For narrowly focused requests, post SARs without a comment period or for a single 15-day comment period without a requirement for the requester to respond to all comments individually.
  - ii. For proposed reliability standards implementing new technical concepts, require a technical foundation document (e.g., a research paper) be developed before a SAR is accepted, not concurrent with or after acceptance.
  - iii. Provide the option for a requestor to submit a draft reliability standard along with the request to develop a new or revised reliability standard.
- b. Informal Comment Periods
  - i. Permit standard drafting teams to use "informal" comment periods for feedback on concepts or information used to develop reliability standards requirements (but not for comments on proposed requirements) where they are not required to respond to the individual comments. [Changes to Section 300 of the NERC ROP and/or Appendix 3A — Reliability Standards Development Procedure may be necessary or desirable.]

- c. Requirements
  - i. Reinforce with the standards drafting teams the need to fully address regulatory directives during development activities such that subsequent modifications to the standards are not necessary, thereby reducing future workload. [Ongoing]
  
- d. Ballots
  - i. Permit multiple initial ballots without the need for multiple 30-day pre-ballot review periods. Permit modification to the balloted reliability standard between these multiple initial ballot periods if the ballot results and associated comments indicate such modifications will provide for continuous improvement to the reliability standard without lowering the thresholds for performance needed to support reliability [Changes to Section 300 of the NERC ROP and/or Appendix 3A — Reliability Standards Development Procedure may be necessary or desirable.].
  
- e. Process Administration
  - i. Give the NERC Standards Committee the option to appoint a single standard drafting team that is responsible for both SAR and reliability standard drafting development.
  - ii. Review the reliability standards development process to identify, eliminate, and/or modify steps that are not explicitly required by ANSI to maintain accreditation — by December 31, 2009. [Changes to Section 300 of the NERC ROP and/or Appendix 3A — Reliability Standards Development Procedure may be necessary or desirable.]
  - iii. Implement a streamlined single topic development process to correct a narrowly focused reliability standard deficiency without obligating a follow-up reliability standards development activity — by June 30, 2010. This process could be used for making conforming changes to reliability standards as a result of interpretations, etc. [Changes to Section 300 of the NERC ROP and/or Appendix 3A — Reliability Standards Development Procedure may be necessary or desirable.]
  - iv. Explore how other ANSI standard development organizations implement their standard development processes to identify possible improvements to NERC's process, including the supermajority voting structure — by October 1, 2009.
  
- f. Training and Support
  - i. Conduct a detailed pre-kickoff session between NERC staff, standard drafting team chairs and vice-chairs, subject matter experts, and regulatory authority staff (if regulatory directives for improvement are involved) to discuss more fully the technical expectations of a reliability standard project and roles and responsibilities of the participants. [Ongoing]
  - ii. Provide training for NERC staff coordinators in team-building, facilitation, and consensus-building skills — by October 1, 2009.
  - iii. Provide enhanced training to the standard drafting team chairs and vice-chairs to ensure that they convey their expectations clearly and effectively to drafting team members.
  - iv. Assign technical writers, regulatory specialists, or have legal support available as focused resources for standard drafting teams dealing with challenging requirements or directives.

- v. At the discretion of the standard drafting team chair, permit a NERC-assigned legal or technical writer to draft reliability standard language based on the standard drafting team's discussion and direction.
- vi. With permission of the standard drafting team chair, allow NERC staff coordinator to provide a straw man draft reliability standard in advance of the first standard drafting team meeting to optimize effective team discussion.

**3. *Promote, encourage, and facilitate participation by smaller entities.***

Stakeholders commented that only the larger, vertically-integrated utilities are able to effectively participate on standard drafting teams or in the reliability standards development process, because only these entities have the staff resources to commit people to these teams. Smaller entities with fewer resources are effectively precluded from participating on standard drafting teams and even from reviewing drafts and participating in the commenting and balloting processes. The process needs to be made more user-friendly for all stakeholders.

Discussion of Comments

NERC is sensitive to the industry resource requirements needed to support its reliability standards development activities and agrees that further outreach and communications to be more inclusive is appropriate. Over half of all NERC reliability standards activities are already conducted via conference call or Web-based meetings, but additional communication to those not directly participating on a standard drafting team or on the NERC Standards Committee would be helpful. NERC opens its standard drafting team servers to any interested party who requests information about a specific standard drafting team.

Specific NERC Actions

- a. Encourage active participation by industry trade groups, especially APPA, NRECA, and EPSA in the reliability standards development process to foster outreach to and solicit increased participation by smaller entities and/or representatives of their interests. [Ongoing]
- b. Develop increased project communications to enable all stakeholders to understand the changes to reliability standards and the expectations therein for registered entities. [Ongoing]
- c. Schedule meetings at more centralized locations to minimize the overall time burden from required travel and continue to conduct over half of standard drafting team activities by conference call or Web-based meetings. [Ongoing]

**4. *Role of Regulatory and NERC staff in reliability standards development.***

Stakeholders commented that FERC staff has been permitted to exert undue public and non-public pressure on the reliability standards development process and been given too much deference in said process. Stakeholders also commented FERC directives are sometimes inconsistent with sound engineering judgment, and NERC should seek rehearing or appeal of those directives that undermine the reliability standards development process, are technically incorrect, or show limited or no gains for reliability.

In addition, there are sometimes differing opinions between the NERC Standards Committee and NERC staff regarding the NERC staff role in the reliability standards development process. In particular, it has not been made explicitly clear what the board expects of NERC staff when balloted reliability standards are submitted to the board for adoption.

### Discussion of Comments

The relationship between NERC staff, FERC staff, and industry participants in the reliability standards development process has evolved over the past three years. FERC Order No. 693 set forth a foundation for reliability standards improvement that NERC, as the ERO, is obligated to address where specifically directed to do so. For its part, FERC, in general, has chosen to be actively engaged forthrightly in its reliability oversight activities, and the industry stakeholders seek more autonomy in the self-regulatory model for reliability standards development. The dichotomous views create the atmosphere for tension when standard drafting teams are engaged in developing reliability standards that include FERC directives. NERC has experienced this impact as it balances its obligation to deliver reliability standards that address the regulatory directives while respecting the technical expertise of those comprising the standard drafting teams.

The NERC board has already provided direction on the issue of FERC staff involvement in the standards development process, by resolution adopted at its October 2008 meeting. In that resolution, the board endorsed the Policy Position Regarding FERC Staff Participation in Standards Drafting Team Activities developed by the Board of Trustees' Corporate Governance and Human Resources (CGHR) Committee, including that (1) the standard drafting team has sole responsibility for drafting and approving the language in proposed standards that are presented to the Standards Committee for ballot; (2) FERC staff should be allowed to participate in all standard drafting team activities, but it is recognized that FERC staff does not speak for the Commission, and therefore input provided by FERC staff is considered advice; (3) standard drafting teams should respond to FERC staff's verbal comments as the team would consider comments offered by other participants in the team setting; and (4) standard drafting team members should seek out the opinion of FERC staff, consider the staff input on its technical merits, and respond to written comments offered during a public posting period as it would seek opinions from, consider the technical merits of, and respond to comments offered by, other industry stakeholders. The board directed NERC management to take the steps necessary to communicate and implement this guidance with FERC staff, NERC staff, the NERC Standards Committee, and all NERC standard drafting teams. Consistent with the board's direction, the NERC Standards Committee in March 2009 approved a document entitled *Roles and Responsibilities: Standards Drafting Team Activities*, which incorporates the policy guidance from the NERC board regarding response to FERC staff involvement in standard drafting team activities.

The board's CGHR committee has also discussed the appropriate role of NERC staff in the standards development process, including the role of NERC staff when standards approved by the industry ballot pool are presented to the NERC board for adoption. The CGHR did not make specific recommendations to the board on this issue, but deferred to the Standards Committee to

address this issue in the *Roles and Responsibilities* document. Because the board believes it is important to have NERC staff provide the board a technical evaluation of standards presented for adoption, including assurance that the proposed standards can be complied with and are auditable, and since this point presently is not addressed in the *Roles and Responsibilities* document, the board will direct the Standards Committee to address this issue in a further revision to the document.

Additionally, Canadian stakeholders and cross-border Regional Entities expressed concern regarding the willingness of Canadian regulators and stakeholders to accept and adopt reliability standards that may have been imposed or dictated by the United States regulator, FERC. These stakeholders expressed concern that the perception that reliability standards content is being driven by FERC rather than developed through the industry consensus process threatens the ability to adopt and implement a uniform set of reliability standards that will apply to the entire interconnected North American bulk power grid.

NERC agrees with commenters that it should seek rehearing or appeal of directives that are of limited or no value to reliability. NERC has demonstrated its willingness to do so with regard to several orders after consultation with the standard drafting teams responsible for the reliability standards. However, a more focused effort is required to better engage the industry to obtain input into NERC's decisions in this regard within the 30-day window of opportunity for filing a request for rehearing or clarification.

#### Specific NERC Actions

- a. NERC board to direct changes to the *Roles and Responsibilities* document (approved by the Standards Committee in March 2009) in order for that document to incorporate the board's expectation that NERC staff will provide the board with its technical evaluations of reliability standards proposed for adoption by the board, including assurance that the reliability standards can be complied with and are auditable.
- b. Reinforce to standard drafting teams that they must develop an approach consistent with regulatory authority directives or, in the alternative, an equal and effective approach to that identified in the regulatory authority directives; if different than a FERC directive, the team must thoroughly document their technical rationale for doing so. [Immediately]
- c. Conduct discussions with FERC staff upon issuance of a Notice of Proposed Rulemaking concerning adoption of a proposed reliability standard or group of reliability standards to ensure an understanding of the Commission's intent before issuance of a final order.
- d. Develop a focused process to obtain feedback from the industry stakeholders regarding newly-issued orders and rulings on proposed reliability standards to determine if filing a request for rehearing or clarification is appropriate within the 30-day window.

**5. *Better align functional categories with current industry/market structure.***

Stakeholders commented that the Functional Model, Compliance Registry Criteria, and the requirements in the reliability standards do not comport well with the variety of business models and sizes of entities now represented by the owners, operators, and users of the bulk power system, particularly in Regions now characterized by competitive electricity markets. These documents need to be better aligned to ensure appropriate registration criteria are being applied and reliability standards reflect the registration.

Discussion of Comments

NERC's reliability standards must work irrespective of the business models that exist within the industry or the size of the entities held to compliance with the reliability standards. The focus on performance expectations and the core reliability functions establish the basis for reliable operation of the bulk power system. The core functions must be performed in order for reliability to be maintained and are at a basic functional level so as not to predestine the organizational or market structure that must exist to comply with the expectations embodied in the Functional Model and carried forth in the reliability standards themselves.

The registration criteria do not drive the reliability standards; the converse is true. If, in the determination of the standard drafting team (and as approved through the industry ballot process) a particular activity requires the extension of reliability standards applicability beyond the criteria established in the NERC *Statement of Compliance Registry Criteria*, the standard drafting team has the latitude to do so but must provide the technical justification for why the extension is warranted. If the resulting new or revised standard identifies a new category of functional entity, that new functional entity and its characteristics will be added to the *Statement of Compliance Registry Criteria* and entities meeting the criteria will be registered for the new function.

Specific NERC Actions

- a. The Functional Model Working Group (FMWG) will complete its Version 5 revisions that address key areas such as the planning function, the load serving entity, distribution provider function, and the interchange function, of which the changes will be incorporated into NERC reliability standard applicability. The target date for completion of Version 5 is October 2009. Projects for implementing the changes related to the FMWG Version 5 activity into the reliability standards will be incorporated into the next three-year Reliability Standards Development Plan.
- b. Implement the recommendations from the Ad Hoc Group for Generator Requirements at the Transmission Interface. The group is scheduled to complete its work by the end of 2009.

**6. *Provide clear measures for each standard requirement.***

Stakeholders commented that reliability standards should include measures corresponding to all requirements and more clearly state what registered entities need to show to demonstrate

compliance, including the documentation requirements, and reliability standards should include examples of documentation that can be used to substantiate compliance. Stakeholders also commented that reliability standards need to focus more on the performance objectives necessary to achieve reliability and less on documentation requirements.

Discussion of Comments

NERC agrees with the general comments, however very prescriptive measures may force entities to change their existing processes and procedures without any real improvement to reliability. As reliability standards are developed in accord with the Reliability Standards Development Plan, each requirement must include an accompanying measure. Standard drafting teams are encouraged to provide examples of acceptable evidence without being overly prescriptive unless there is only a single way of demonstrating compliance with a requirement.

Specific NERC Actions

- a. Work with the compliance program to ensure that measures (1) directly correspond to each requirement of each standard describing what an entity has to do to comply, (2) include examples of acceptable evidence without being overly restrictive, and (3) identify what documents are necessary to maintain and produce to demonstrate compliance. These expectations should be conveyed to stakeholders in the Reliability Standard Audit Worksheets (RSAWs) or through other suitable approaches.

**7. *Enhance Stakeholder Communications.***

Stakeholders suggested that NERC provide a forum on its website on which stakeholders could communicate with each other on reliability standards-related topics.

Discussion of Comments

NERC agrees with the need to enhance stakeholder communications. NERC has taken positive steps toward better engaging the industry through increased Web-based meeting opportunities on individual projects. However, NERC must do a better job of keeping its Website updated so the industry has the latest and correct information on reliability standards activities. Additionally, NERC also agrees that an industry forum or blog for stakeholders to exchange thoughts and ideas would facilitate greater levels of interaction and engagement in NERC's processes.

Specific NERC Actions

- a. Continue to conduct open Webcasts to present and obtain feedback on proposed concepts; for example, to stakeholders as reliability standards are being developed.
- b. Provide the industry stakeholders with a NERC forum or blog to enable them to communicate with regard to reliability standards under development and on reliability standards activities in general. Target to provide is 2010.

8. *Expedite completion of “fill-in-the-blank” reliability standards.*

Regional Entities commented that NERC, in conjunction with Regional Entities, should refocus their collective efforts on expediting the “fill in the blank” reliability standards and place a hold on any non-emergency reliability standards. The speed at which the industry can absorb new reliability standards is resource limited. The priority should be to fix the “fill in the blank” reliability standards (those reliability standards not originally accepted by FERC), and reliability standards that address emerging issues or risks found through event analysis. The fill-in-the-blank reliability standards should be revised to remove the fill-in-the-blank components.

Discussion of Comments

NERC’s current three-year Reliability Standards Development Plan, discussed in more detail under Issue #1, addresses the “fill-in-the-blank” reliability standards.”

Specific NERC Actions

- a. Address the “fill-in-the-blank” reliability standards as part of NERC’s three-year Reliability Standards Development Plan.



## **B. Organization Registration and Certification**

### ***1. Raise threshold criteria for requiring entities to be registered.***

Stakeholder comments suggest that the registration criteria have very low thresholds that capture small- to medium-sized entities that have no impact on bulk power system reliability. Comments recommend registration criteria be modified to more appropriately determine registration responsibility based on material impact to the reliability of the bulk power system.

Some Regional Entities expressed concern that time and resources spent on monitoring and enforcing compliance for smaller entities with minimal impact on the bulk power system is distracting focus and resources from monitoring entities with significant impacts on bulk power system reliability.

Regional Entities commented that NERC and the Regional Entities, in consultation with stakeholders, should review the registration criteria to determine if there should be a different threshold for materiality to the reliability of the bulk power system and determine if compliance resources could be better prioritized by modifying the registration criteria. Regional Entities also recommended NERC consider a more precise long-term solution of increasing the granularity of registration so it focuses on the requirement level and includes registration by a bulk power system facility, or classes of facilities.

One Regional Entity also commented there have been numerous questions surrounding the inclusion of generators in the NERC Compliance Registry, and believes improvement in reliability could be made, as well as the elimination of confusion and inconsistency in registration criteria, if NERC would consider requiring all generators with nameplate ratings greater than 20 MVA, regardless of connection voltages to be included in the NERC Compliance Registry.

#### Discussion of Comments

The intended purpose of the Compliance Registry is to reasonably and fairly put registered entities on notice of the reliability standards with which they will be expected to comply. In cases where some of the requirements in a standard may not apply to a particular entity, given how it has organized and conducts its business, the entity need do nothing in regard to the requirement.

The original basis for NERC's registration criteria for generators reflected FERC orders related to large generators including Order 2003 — Standardization of Generator Interconnection Agreements and Procedures. In that order, FERC specified a 20 MW threshold for interconnecting generators. For loads, NERC used 25 MW as the threshold because 25 MW load was the level that Regions and others normally used as a threshold in their transmission system modeling studies.

NERC, in conjunction with the Regional Entities and the Registration Working Group (RWG), reviews the registration categories and criteria on an ongoing basis, based on experience, and makes changes when deemed necessary. This is reflected in the facts that: (i) the NERC

Statement of Compliance Registry Criteria is now at Version 5.0; and (ii) registered entities have in fact been removed from the Compliance Registry. In addition, review by NERC or a Regional Entity of the characteristics of individual registered entities, or groups of registered entities, and their impacts on the reliability of the bulk power system, can result in registered entities being removed from the compliance registry. For example, in early 2009, FRCC recommended that a number of smaller generators in a Region should be removed from the compliance registry, and NERC concurred in that recommendation.

The RWG, with NERC oversight, is currently administering a survey of registered entities on registration criteria application issues.

Overall, NERC believes that the organization registration process is working well. While the following specific NERC actions are worth consideration, they are currently considered low priority actions.

#### Specific NERC Actions

- a. Review existing registration criteria with NERC technical staff for possible changes.
- b. Request comments from stakeholders on the existing criteria through the Organization Registration and Certification Subcommittee (ORCS) of the Compliance and Certification Committee (CCC), as well as from NERC's Planning and Operating Committees.
- c. Request comments on the existing criteria from the Regional Entities through the Registration Working Group (RWG).
- d. Review data from registered entities surveys currently being administered by the RWG with NERC oversight for criteria application issues.
- e. Support Regional Entities working through existing procedures; continue the process of responding to specific issues related to registration criteria on a case-by-case basis.
- f. Reinforce to Regional Entities that they can remove entities from the Compliance Registry, but the Regional Entity must determine that removal of the entity creates no material impact to bulk power system reliability before the entity is removed from the Compliance Registry.
- g. If an event analysis finds entities that meet the criteria for inclusion in the NERC Compliance Registry that were not on the Compliance Registry when they were involved in a disturbance, these entities will be immediately added to the registry for all applicable functions. If an event analysis finds entities that do not meet the criteria for inclusion in the Compliance Registry, but were involved in a disturbance, the event analysis team can recommend to the applicable Regional Entity that these entities be added to the Compliance Registry.

#### **2. *Allow registration by requirement.***

Stakeholder comments also recommend that registration requirements should be modified to allow entities to register for packages of requirements that correspond to their activities, rather than be responsible for all requirements applicable to a functional category to which they are

assigned, since some of the requirements currently applicable to them may not correspond to their activities. Several Regional Entities have endorsed “registration by requirement.”

### Discussion of Comments

In general, NERC does not support this approach. The purpose of the Compliance Registry is to reasonably and fairly put registered entities on notice of the reliability standards they will be expected to comply with. The combination of the reliability standards, with their applicability clauses, the Compliance Registry, and the matrix of requirements and functions provides the registered entities with reasonable notice of the requirements that the registered entities must meet. It is true that some of the requirements in a standard may not apply to a particular entity, given how it has organized and conducts its business. In such cases, if the requirement does not apply, the entity need do nothing. In no case is a registered entity being held responsible for compliance with a requirement in a standard that applies to a function for which the entity is not registered. NERC has provided for joint registration agreements, which allow registered entities to allocate particular requirements between or among themselves. But based on NERC’s experience during the development of the current registry, there are a myriad of ways entities organize and carry out their businesses, even within a class of entities that would at first appear to have a common set of interests. Neither NERC nor the Regional Entities has the detailed knowledge of individual entities to make the judgments necessary to properly and systematically apply registration by requirement. That information is in the hands of the registered entities. In addition, if registered entities were registered only for the requirements they perform currently, there would be no certain way to keep track of additional requirements they may take on over time. By registering entities by function, NERC maintains the ability to judge which requirements apply on a case by case basis.

NERC will continue to promote the use of joint registration agreements through the Joint Registration Organization (JRO) option. This option allows registered entities to jointly identify requirements for which they are responsible through an agreement between or among themselves. Such an approach provides for clarity regarding responsibilities for those entities through voluntary agreements.

### Specific NERC Actions

- a. NERC will continue to promote the use of JRO agreements.
- b. NERC will attempt to identify other solutions short of “registration by requirement” that will address the concerns expressed by stakeholders.

### **3. *Improve consistency across Regional Entities.***

Stakeholders indicate NERC needs to do more to ensure consistency among the Regions in registration determinations. Some entities with operations in more than one Region commented that similar assets and/or business operations are registered differently from one Region to another due to the Regions’ differing interpretations of the reliability functions and registration criteria. Also, stakeholders indicate that the provision for an independent appeals process for

registration and certification as stated in the Rules of Procedure has not been consistently applied.

#### Discussion of Comments

NERC provides guidance to Regional Entities to ensure consistency in the organization registration process, through the *Statement of Compliance Registry Criteria*. NERC is fully aware of its responsibility to ensure the registration categories and criteria are applied consistently across the Regions and, in fact, has been instructed on this responsibility by the Commission in prior orders. NERC has implemented several successive revisions to the *Statement of Compliance Registry Criteria* to better refine the registration categories and criteria, based on experience. Additionally, any entity that disputes a registration determination by a Regional Entity is entitled to appeal that determination to NERC.

NERC has begun, in conjunction with the RWG, a project for updating registered entity information, including reporting relationships for functional entities. Review of the data from this survey will enable NERC to determine inconsistencies in registration across the Regional Entities. Target for completion of the project is late summer 2009.

Finally, NERC has established a Regional Operations Group (which includes senior Regional Entity management and is headed by a director of regional operations) to monitor and address issues of consistency among Regional Entities in all areas, including application of organization registration categories and criteria.

#### Specific NERC Actions

- a. On an ongoing basis, review with the Regional Entities current practices for organization registration and provide additional guidance, as necessary, to improve consistency.
  - b. Complete the project for updating registered entity information [by late summer 2009].
  - c. Complete the specific NERC actions listed in Organization Registration Issue #1.
- 4. *Provide process for single registration for entities doing business in more than one Regional Entity.***

Stakeholders recommend there should be a single registration process available for entities that perform the same functions in more than one Region and the forms relating to registration should be standardized for all Regions.

#### Discussion of Comments

NERC is working with the RWG to develop processes and procedures for all issues associated with Multi-Regional Registered Entities (MRRE), including the possibility of a single registration process for those entities doing business in more than one Region. An initial draft of the MRRE process is expected to be available in June or July 2009.

### Specific NERC Actions

- a. Continue and complete development of the MRRE processes and procedures (initial draft by July 2009).
- b. Amend the delegation agreements and ERO Rules of Procedure as necessary to include or accommodate such processes and procedures.

### **5. *Improve joint registration procedures.***

Stakeholders offered a number of comments and criticisms regarding the Joint Registration Procedures, which included:

- NERC and the Regional Entities have not provided adequate guidance or information on the availability of, or criteria for, joint registration.
- The existing Functional Model makes it difficult to bifurcate responsibilities for purposes of joint registration.
- The Joint Registration Procedures in Rules of Procedure Section 500 need more development with respect to establishing which entity has what responsibilities in a joint registration situation.
- The joint registration process should be modified since currently it can be used only where the entities have all registered for the same function.
- The NERC Rules of Procedure should provide an alternative registration process for those situations where compliance responsibilities are shared among entities by agreement and formation of a Joint Registration Organization (JRO) is not required.
- The Joint Registration Procedures should be modified to allow parties to develop a matrix assigning responsibilities, rather than the very formal process required by the NERC Rules of Procedure Section 507.

### Discussion of Comments

The NERC JRO process is not designed for implementation using the Functional Model. The purpose of the Functional Model is to provide a guide for the development of reliability standards. The functional entities identified in the reliability standards are the entities required to be registered for those reliability functions. The JRO applicable functions are identified in the NERC Statement of Compliance Registry Criteria. The JRO process is for sharing reliability standard requirement responsibilities for one function between two or more registered entities. It is, by design, a formal process to ensure distinct identification of the responsibilities for compliance with reliability standards requirements agreed to by each member of the applicable JRO. The process for JRO registration gives the entities included in each agreement some flexibility in the format of the agreement and associated data as long as the formal requirements of Section 507 of the NERC ROP are addressed. Some consistency in the agreements is required due the ROP requirement for NERC to post all JRO information for each agreement. Significant inconsistencies in the posted agreements could lead to confusion in interpretation of the posted data.

However, on an ongoing basis, in conjunction with the Regional Entities, NERC continues to evaluate the JRO procedures for possible clarifications and improvements in light of experience in their application.

Specific NERC Actions

- a. NERC will continue, in conjunction with the Regional Entities, to review the joint registration process for possible improvement.
- b. NERC will revise presentations used at Regional Entity conferences and workshops to include more detailed information on JRO registration process and procedures.
- c. NERC will review the JRO process with the NERC legal department and develop, as applicable, guidelines for JRO registration, including a suggested template for JRO agreements.

## C. Compliance Monitoring and Enforcement

### 1. *Put more emphasis on training, education, and assistance regarding what it takes to comply with, and to demonstrate compliance with, reliability standards.*

Stakeholders commented that NERC and the Regional Entities should provide more interpretations, guidance, and assistance to registered entities on what is required to comply with, and what is sufficient to demonstrate compliance with, reliability standards requirements. Stakeholders offered a number of specific suggestions, which included:

- Establishing a “Help Line” for questions about CMEP documents, forms, and procedures;
- Conducting more webinars and generic on-line courses on compliance topics including what constitutes compliance with particular reliability standards and examples of adequate documentation to show compliance;
- Establishing advisory processes, similar to the “No-Action” letter process offered by agencies such as the SEC, IRS, and Department of Justice, through which a registered entity may describe the means it proposes to implement compliance with the requirement(s) of a standard, and NERC will advise the registered entity as to whether its proposed actions will constitute compliance with the requirement(s), so that if the registered entity then implements the described means of compliance, it will not be found in non-compliance;
- Developing and making available templates of best practices to assist the industry in knowing what is necessary to achieve and demonstrate compliance with reliability standards; if a registered entity followed the template, it would be in compliance with the standard;
- Making auditor training courses available to the industry;
- Identifying best practices being used by registered entities as well as suggestions for improvements based on knowledge gained during compliance audits, such as by issuing periodic reports based on audits of functional entity types identifying best practices found in audits; and
- Posting and disseminating “lessons learned” from compliance monitoring and enforcement activities; including examples and guidance as to what compliance audits have found to be acceptable and unacceptable in terms of demonstrating compliance with reliability standards, even while the specific violations are still being processed (and therefore are not yet publicly posted).

Some stakeholders also expressed concern that the NERC compliance program has become a paper chase to find violations and penalties with a “gotcha” mentality, rather than focusing on helping entities conduct their activities and operations so as to improve bulk power system reliability.

#### Discussion of Comments

NERC believes that its compliance program and the Regional Entity compliance programs already provide a considerable amount of guidance to registered entities on what is required to comply with reliability standards and to demonstrate compliance, including the Reliability

Standards Audit Worksheets (RSAWs), discussion/description in filed and posted notices of confirmed violations and penalties, and workshops and seminars on compliance (the materials from which are generally posted on NERC and Regional Entity Websites and therefore available even to those who did not attend). Nevertheless, NERC agrees that it would be in the best interest of improving reliability to provide additional instruction, assistance and guidance to registered entities in the form of many of the suggestions offered as listed above. For example, consistent with the concept of the “No-Action” letter used by various regulatory bodies, if a registered entity presented to NERC or Regional Entity a hypothetical set of facts or a proposed future action for complying with a standard, NERC or the Regional Entity should be able to provide that registered entity with a determination whether that proposed action would be in compliance with a standard, and if not, why.

However, NERC believes that it would not be appropriate to comment on whether what a registered entity has already done is in compliance with a standard or not. That is essentially a spot-check on compliance and NERC or the Regional Entity would be obligated under the terms of the current CMEP procedures to issue a Notice of Alleged Violation for any finding of non-compliance.

In light of the stakeholder comments, it may be appropriate for NERC and the Regional Entities to review the means currently used to publicize to registered entities the means of obtaining guidance that are currently available. Additionally, NERC believes that its training and education program should develop more documents and programs to educate registered entities on means for complying with reliability standards and appropriate documentation to demonstrate compliance. Such programs could include, for example, templates of best practices as mentioned in the comments.

#### Specific NERC Actions

- a. Develop a proposed process or processes by which registered entities can submit hypothetical or proposed means of complying and demonstrating compliance with particular reliability standards for review and guidance by NERC. The implementation of any such processes must take into account the impacts on NERC and Regional Entity time and resource constraints.
- b. Evaluate and implement ways to make registered entities more aware of means currently available to them to obtain guidance on how to comply with reliability standards and how to demonstrate compliance.
- c. Promote more assistance by others, including third-party providers and industry trade associations. Consider partnering with industry trade associations where appropriate.
- d. Increase the offerings of programs and information by the NERC training and education program focused on appropriate means of complying and demonstrating compliance with particular reliability standards.
- e. Get more compliance cases processed through the system as one mean of providing guidance on what is leading to violations.



**2. *Eliminate the backlog of audit reports and compliance violations so more precedents are available to industry.***

Stakeholders commented that the backlog of audit reports and compliance violations is preventing the industry from having a body of audit findings and violation determinations to generate a body of “precedents” that would enable registered entities to better understand what constitutes compliance with requirements and what is needed to demonstrate compliance. Stakeholders also commented that the Regional Entities have inadequate staffing to process the volumes of compliance violations, self-reports, and mitigation plans they are receiving, and NERC should provide more guidance and oversight of the Regions. Finally, stakeholders commented that in order to promote more expeditious and efficient processing of violations, NERC, the Regional Entities, and FERC need to clearly delineate their respective roles and responsibilities and work to eliminate duplication and overlap. Regional Entities added that NERC and the Regional Entities should work together to provide a clearer division of responsibilities, both related to the division of performance of statutory functions and oversight of those functions, and to provide effective mechanisms to resolve routine differences.

Discussion of Comments

NERC takes seriously stakeholder concerns about the adverse impacts of the backlog and agrees with stakeholder comments in this regard. NERC is taking a number of steps to streamline its processes and those of the Regional Entities by directing additional resources to the processing of notices of alleged violations, settlements, and mitigation plans to completion, in order to improve efficiency and eliminate existing backlogs. The factors that have led to the compliance backlog, and the steps NERC intends to implement to reduce processing times, are described in detail elsewhere in this report. NERC does believe the times for processing notices of alleged violations, settlements, and mitigation plans will decrease as NERC and the Regional Entities continue to gain experience with these processes, including better common understandings of what is necessary for a complete record concerning a notice of alleged violation and/or settlement and for the necessary components of a mitigation plan.

The NERC and Regional Entity 2009 budgets provided for significant increases in staffing and resources for their respective Compliance programs, which will assist in addressing this issue. NERC is also planning to take the following actions: (1) provide specific performance metrics and require consistent application of the CMEP processes as they are implemented by the Regional Entities; (2) provide the option for Regional Entities to request NERC assistance early in the Regional Entity’s development of Notices of Alleged Violation and Proposed Penalty or Sanction, or proffering a settlement offer to a registered entity, before issuing the notice or proffering the settlement to the registered entity; (3) continue development of a centralized, common data hub to be used by NERC and the Regional Entities for the collection and management of compliance data and information; and (4) develop and implement simplified compliance and enforcement approaches, such as “pro-forma” settlement options<sup>2</sup>, that can be

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<sup>2</sup> An initial version of a, pro forma settlement option has been developed, but its use by Regional Entities has been very limited to date. NERC staff is reviewing the scope of that option to allow for expanded use.

used for violations of documentation requirements or other administrative requirements, where the registered entity is performing the necessary task required by the standard and the risk to the bulk power system is low. NERC will seek to negotiate revisions to the delegation agreements, as needed, to incorporate these actions.

Greater acceptance and use going forward of the simplified options identified above, which will require fewer NERC and Regional Entity resources to process, particularly for newly self-reported or discovered violations, will enable NERC and the Regional Entities to continue to focus compliance resources on the most significant violations and avoid future processing backlogs.<sup>3</sup>

The suggested actions listed below were developed based on comments and suggestions from the May 19 workshop and other Round 2 comments. They represent what stakeholders and Regional Entities believe NERC should do to improve the speed of processing alleged violations, and address other compliance program issues, in lieu of NERC becoming more directly involved in the Regional Entities' processes as NERC suggested in earlier posted drafts of this report.

Specific NERC actions

- a. Continue to develop and expand the uniform set of forms, templates and detailed set of processing steps, including “example” documents, which Regional Entities must follow.
- b. Establish a more extensive training program for Regional Entity compliance personnel.
- c. Continue to develop simplified, streamlined options for processing violations, including various forms of “pro forma” settlements, for certain frequently occurring violations that pose a lower risk to the bulk power system (e.g., missing documentation and other administrative, low-risk violations) by establishing standard penalties and mitigation plan elements that can be processed more expeditiously.
- d. Continue to identify and implement improvements to the management plan for the compliance enforcement program, including the delegated functions.
- e. Provide the option for Regional Entities to ask for help and advice in advance of issuing Notices of Alleged Violation and Proposed Penalty or Sanction, or proffering a settlement offer, to a registered entity.
- f. Continue to increase NERC and Regional Entity staffing and other resources dedicated to the Compliance programs, including processing Notices of Alleged Violation, settlements, and mitigation plans.
- g. Continue development of a common, centralized platform for collection and maintenance of compliance information by NERC and the Regional Entities.
- h. Continue to study NERC and Regional Entity compliance processes to identify and implement ways to eliminate duplication and overlap and streamline and shorten those processes.

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<sup>3</sup> WECC, in coordination with NERC, has developed a plan for reducing the backlog of its older, lower significance violations, which it plans to use to file with FERC, in batch form, a number of Notices of Confirmed Violations. NERC will work with other Regions with backlogs of older, lower-significance violations to make similar filings as circumstances warrant.

- i. Amend the delegation agreements and ERO Rules of Procedure as necessary to implement or accommodate the proposed actions.

**3. *Provide more guidance on mitigation plans and process proposed plans more quickly.***

Stakeholders suggested NERC provide more guidance on the type(s) of mitigation efforts that are appropriate for specific types of violations.

Stakeholders also commented there is too much delay in completing review and approval of mitigation plans. Timely feedback on submitted mitigation plans is important so the entity knows its mitigation activities are appropriate, especially for self-reported violations.

Discussion of Comments

Recent changes to the uniform Compliance Monitoring and Enforcement Program, Appendix 4C to NERC's ROP, in response to FERC orders, provide that Regional Entities have 30 days to review and accept mitigation plans and NERC has 30 days to review and approve the plans once received from the Regional Entity. NERC anticipates implementation of these specific time lines will reduce the processing times for review and acceptance/approval of proposed mitigation plans.

NERC agrees that providing more guidance to registered entities on what constitutes an adequate mitigation plan is appropriate. Such guidance could be provided in the form of templates or lists of appropriate mitigation steps for different types of violations.

Specific NERC Actions

- a. Continue to monitor the process for review, acceptance, and approval of mitigation plans to ensure timely processing.
- b. Develop templates and/or lists of "pre-approved" appropriate mitigation steps for particular types of violations.

**4. *There is no incentive for registered entities to self-report violations because there is no apparent benefit or advantage to self-reporting.***

Stakeholders commented that NERC and the Regional Entities have not been effective in encouraging self-reporting, because (i) self-reports are not processed any more timely than violations reported/discovered through other means, (ii) the administrative process is burdensome even for minor self-reported violations, so the registered entity does not experience reduced administrative time and cost for self-reporting, and (iii) there is no indication that the fact of self-reporting results in any reduction in penalties.

Discussion of Comments

The fact that a violation is self-reported does not mean the violation was simple and easy to process. Self-reported violations may contain complicated facts that require the Regional Entity

to spend considerable time reviewing the circumstances surrounding the violation as well as the mitigation plan to correct it.

For self-reported or self-certified violations of a minor or administrative nature, the short-form settlement, if used by registered entities, should result in shorter processing times. NERC specifically designed the short form settlement process for self-reported and self-certified violations, because such cases require less effort to develop a record.

The determination of the appropriate level of penalty to impose for a specific violation depends on the unique set of facts and circumstances leading to that violation. Because self-reporting is only one of many factors that is taken into account in making these determinations, NERC believes it is impractical and inappropriate to indicate in final penalty determinations a specific dollar amount of credit given for self-reporting (or any other mitigating factor.) NERC does provide in the final Notice of Violation and Proposed Penalty a statement of all factors considered in determining the proposed penalty, including whether the violation was self reported. Further, Notices of Violation and Proposed Penalty or Sanction that have been issued for a self-reported violation have in fact stated that the self-reporting of the violation was a factor taken into account in mitigating the penalty, in accordance with the NERC *Sanction Guidelines*.

#### Specific NERC Actions

- a. Continue to offer the pro forma settlement approach (as revised) for self-certified or self-reported minor violations and those of an administrative nature.
  - b. At such time as a significant sample of enforcement actions have been completed, evaluate such actions overall for the impact on self-reporting.
5. ***Focus audits on whether the registered entity's actual performance demonstrates compliance rather than on documentation and provide recommendations for improvement.***

Stakeholders commented that the NERC and Regional Entity compliance programs are unduly focused on documentation and the wording of documentation rather than on actual performance that enhances reliability of the bulk power system. Commenters also stated that compliance auditors are too focused on literal application of reliability standards requirements and the RSAWs and are unwilling to objectively examine the registered entity's evidence or consider alternative evidenced demonstrations of compliance. Finally, commenters stated the audit process does not give the registered entity the opportunity to point out items that demonstrate compliance or explain their interpretation of the standard or rationale for why they believe they were in compliance.

#### Discussion of Comments

NERC is obligated to consider evidence demonstrating compliance with all the requirements that appear in approved reliability standards if they are subject to an audit, including requirements that documentation be maintained, until and unless the reliability standards are changed. Demonstration of compliance with the requirements requires some form of documentation or other evidence for the auditor to evaluate that shows or explains how the entity complied with

the requirement. Among other things, the RSAWs provide for written explanations under oath (verified) to be provided and accepted as evidence of compliance. Additionally, under the uniform CMEP, the registered entity receives a draft compliance audit report and has the opportunity to submit comments on it, which provides the registered entity the opportunity to point out information demonstrating compliance that the entity believes the auditors overlooked or failed to sufficiently consider. The Regional Entity is then required to consider the registered entity's comments before issuing the final compliance audit report.

From the violations of reliability standards identified to date, nearly 3 of every 4 are self-reported and nearly 50 percent of all violations are documentation related. However, NERC is seeing a tapering off of these kinds of violations as registered entities incorporate the necessary information in their procedural documents as part of implementing approved mitigation plans, or lessons learned from seminars and workshops, or from reviewing notices of confirmed violations, settlements, and mitigation plans of other entities.

As described above, compliance auditors are instructed to consider alternative means of compliance and demonstration of compliance as provided by the registered entity. However, except by observation in those compliance audits in which NERC personnel participate, NERC can only be aware of auditors failing to consider alternatives if this is reported in the registered entity's post-audit questionnaire.

#### Specific NERC Actions

- a. Continue to revise the RSAWS to improve their quality and usefulness.
- b. Continuously review compliance audit processes and post-audit questionnaires to verify the audit team provided the registered entity with adequate opportunity to explain and demonstrate how the registered entity has complied with the applicable requirements.

#### **6. *Provide more uniformity and consistency in audits between Regional Entities and between different audit teams.***

Stakeholders commented that differences persist among Regional Entities in the interpretations of reliability standards, enforcement, and audit practices, including timing and type of documentation requests; the need to prove the negative; quantity and level of detail in evidence accepted; interpretation of specific requirements; and willingness to consider alternative evidence presentations. Stakeholders indicated similar circumstances; documentation considered compliant by one audit team was found non-compliant by another audit team.

Stakeholders recommended NERC take a stronger, leadership role in eliminating these differences and in ensuring uniformity and consistency across all Regions, including the development and implementation of a common set of auditing procedures and training that is consistently implemented across all Regions. They also suggested greater use of NERC audit team members would promote greater inter-Regional consistency.

Finally, stakeholders suggested that NERC establish a hotline or frequently asked questions (FAQ) site for audit teams to get prompt answers to questions that arise during audits, which would further promote consistency.

### Discussion of Comments

NERC currently provides Regional Entity auditors with a compliance auditor's manual, pre-audit questionnaires, RSAWs, and auditor training before an auditor can participate on an audit team. In addition, NERC personnel observe Regional Entity compliance audits as time and resources permit (approximately 8 percent of all audits), which helps promote consistency among audit teams within a Region, and among audit teams across Regions. NERC acknowledges additional efforts (which would require more resources) could be devoted to ensuring uniformity and consistency, including increased training time for auditors, increased NERC participation in (observation of) Regional Entity audits, more feedback to Regional Entity compliance audits from NERC-led audits, and increased discussion in compliance audit reports of how compliance with reliability standards was demonstrated (and what evidence was lacking) for those requirements for which the auditors found non-compliance.

NERC has recently established a Regional Operations Group, headed by a director of regional operations, within the compliance program whose responsibility is to monitor the Regional Entities' implementation of their compliance programs, including audits, with a focus on (among other things) ensuring consistency.

NERC has considered development of a hotline or FAQ site for audit teams as suggested in the comments, but implementation of such a site will require additional funding resources.

### Specific NERC Actions

- a. In conjunction with the Training and Education Program, review the need for additional auditor training, including remedial training or counseling in cases where specific problems are identified.
- b. Review existing templates or instructions for compliance audit reports to ensure they require specific discussion of how compliance was demonstrated by the registered entity and what evidence was lacking in determinations of non-compliance.
- c. Continue to monitor the Regional Entities' implementation of their compliance programs, including audits, through the NERC Regional Operations Group.
- d. Amend the delegation agreements and NERC ROP as appropriate to accommodate and support the proposed changes to ensure consistent implementation of the CMEP processes across Regional Entities.

### **7. *Improve the efficiency and effectiveness of the compliance audit process.***

Stakeholders commented that the current compliance audit process, which requires documentation of compliance with numerous requirements for every day of the past 3 to 6 years, is extremely burdensome on registered entities, and is diverting resources from forward-looking

activities to improve reliability. Some of the comments and suggestions received regarding the audit process were:

- The compliance audit program should be broken down into a series of more frequent audits that cover fewer reliability standards in each audit and focus on specific areas of the applicable reliability standards in each audit, but over the entire 3-year or 6-year cycle audit all the applicable reliability standards.
- More reliability standards are being scheduled to be covered in the audits than can reasonably be covered in the time provided for the audit.
- The time provided to fill out pre-audit questionnaires and RSAWs is not adequate; the RSAWs should be provided to the registered entity 120 days in advance of the audit.
- Additional information is often requested during the audit without reasonable notice and without indication of what requirement it relates to.
- Some compliance auditors arrive on-site without having reviewed the information and documentation that was provided in advance, and ask for material that had already been provided.

### Discussion of Comments

NERC's ROP (Appendix 4C — CMEP, §3.1.4) currently requires all reliability standards that are actively monitored in the current year's and previous three years' annual CMEP Implementation Plan are to be audited in a compliance audit. NERC is currently monitoring actively 40 of the 95 approved reliability standards, but not all of the requirements of these reliability standards. (NERC and the Regional Entities must, however, pursue any violations of approved reliability standards that come to their attention, even if the standard is not one that is being actively monitored.) However, NERC will consider the suggestions for making the individual audits less burdensome. NERC is also considering lengthening the amount of on-site time allotted for each audit in order to ensure sufficient time for all the reliability standards scheduled to be audited to be covered adequately.

Except by observation in those Regional Entity audits in which NERC personnel participate, NERC cannot be aware of specific instances of auditor conduct such as listed in the last two points above unless it is reported by registered entities in their post-audit questionnaires.

### Specific NERC Actions

- a. NERC will continue to review the results of compliance violation results and event analyses to select reliability standards and requirements for active monitoring in order to focus attention on those areas where reliability could be most improved.
- b. NERC will consider splitting the 3-year or 6-year audits into a series of audits that cover fewer reliability standards in each audit but that in the aggregate will cover all the required reliability standards within the 3- or 6-year window.
- c. NERC will continue to solicit feedback from registered entities on their audit experience (including through reviewing registered entities' responses to post-audit questionnaire), and consider the information gained and observations from participation by NERC

personnel in Regional Entity audits, to identify areas for improvement in audit processes and training auditors.

- d. NERC will consider revising the audit process (as specified in the uniform CMEP, Appendix 4C to the NERC ROP) to provide more time prior to audits to complete RSAWs. Some Regional Entities have already taken this action.

**8. *Improve the quality and value of the RSAWs.***

Stakeholders commented the NERC RSAWs (which are not FERC-approved) are unclear, poorly written, lack the specificity needed for a compliance audit, in some cases create additional requirements that expand the compliance obligations beyond the clear language of the standard, are inconsistent with the measures in the standard, and contain incorrect information. Stakeholders also offered specific format suggestions for the RSAWs, including:

- State the standard title and number on the front page (cover) of the RSAW.
- Add page numbers and paragraph numbering.
- Order the questions in the RSAW consistent with the order of the requirements they are addressing.
- Include at least one question that allows an explicit response to demonstrate compliance for each requirement/sub-requirement.
- The RSAWs are too long and should be condensed.
- While the text windows are a welcome addition, they provide little benefit unless the rest of the RSAW is protected.
- Signing and notarizing each individual RSAW is cumbersome and non-value-added; a form should be developed for one signature and verification for all the RSAWs being submitted by the registered entity.
- List specific minimum required evidence in the RSAWs.

Discussion of Comments

NERC agrees that the current version of the RSAWs can be improved. NERC recently completed a thorough review and revision of all the RSAWs in May 2009, and will consider the above-listed stakeholder comments as part of future reviews. NERC is currently drafting RSAWs for standards that have never had RSAWs and is working with Regions to update the CIP RSAWs. NERC views the RSAWs as living documents that will be reviewed and revised on a continuous basis.

A number of the Regional Entities have developed and are implementing a form that can be used by the registered entity to verify all RSAW submissions on one form with one signature, rather than having to separately verify each completed RSAW.

Specific NERC Actions

- a. Work with Regional Entities to update the CIP RSAWs.



- b. On a going-forward basis, in conjunction with Regional Entities, and based on feedback from registered entity post-audit questionnaires, continue to improve the quality and usefulness of the RSAWs.
- c. Formalize the RSAW development and maintenance process in the NERC ROP and delegation agreements.

**9. *Compliance violation investigations take too long.***

Stakeholders commented that compliance violation investigations following system events take too long to complete — sometimes more than a year — and investigations are not being conducted efficiently. Stakeholders indicated this results in the involved entities being kept in limbo as to whether they may have violated or may be continuing to violate reliability standards, and also delays notifying the rest of the industry of lessons learned and process improvements.

Discussion of Comments

NERC will continue to review compliance violation investigation processes, procedures, and training for streamlining and improvement. NERC has recently formed a separate group in compliance, with increased staffing, to conduct Compliance Violation Investigations (CVIs); this increase in resources should produce more timely CVIs.

NERC acknowledges that some Regional Entity-led CVIs have taken longer than desirable, due to resource constraints, i.e., Regional Entity compliance personnel assigned to CVIs also have ongoing responsibilities with respect to scheduled compliance audits and other compliance monitoring activities. Another reason CVIs have taken so long in the past is that the CVI was not initiated until after the event analysis of the underlying occurrence was completed or at least well under way. NERC is now conducting CVIs in parallel with the event analysis where doing so would produce more expeditious results.

Through its alerts program and other means, NERC will also consider disseminating “lessons learned” information from occurrences that are under investigation even though the investigation has not been completed.

Specific NERC actions

- a. Continue to review compliance violation investigation processes, procedures, and training for streamlining and improvement.
- b. In conjunction with event analysis, review the process for coordinating the initiation of CVIs and event analyses. [See also specific NERC action D.6.a.]
- c. Disseminate preliminary lessons learned from CVIs to the industry as soon as practicable.

**10. *Basis for penalty determinations needs to be more transparent.***

Stakeholders commented that NERC should make its penalty calculator tool public so registered entities can understand how penalties are determined and the consequences of various

actions/inactions. Stakeholders also indicated that the ranges of penalties indicated by the *Sanction Guidelines* coupled with the number of mitigating and aggravating factors are too broad to be meaningful, and the guidance in the *Sanction Guidelines* is too general to be helpful. Further, stakeholders commented that without the penalty calculator tool made public, registered entities cannot be sure the *Sanction Guidelines* are being followed and the lack of transparency and clarity in penalty calculations makes it appear that penalties are subjective. Other comments regarding the determination of penalties included:

- A calibration process needs to be established to demonstrate and ensure penalties are calculated consistently across Regions.
- The “per day” aspect of the penalties in the *Sanctions Guidelines* is unclear and makes it impossible to determine what a penalty would likely be for a violation.
- Penalties to-date do not appear to be in line with the actual negative impact the violation has had on the reliability of the bulk power system (i.e., penalties are too high in relation to potential impact on reliability).
- Penalties issued for documentation errors or minor administrative violations with no impact on the bulk power system have been excessive and unreasonable.
- It does not appear that credit is being given for self-reporting or aggressive corrective action by the registered entity.
- Due to the enforcement backlog and small number of violations that have been processed to completion, it is not possible to assess whether penalties bear a reasonable relation to the severity of the violation and potential consequences to the bulk power system, or take into account the entity’s remedial efforts and overall compliance efforts (or lack thereof.)

### Discussion of Comments

The NERC Board of Trustees Compliance Committee recently considered whether the penalty calculator tool should be made public and concluded that it should not at this time. This decision was based, among other factors, on the additional resources that would be required to support a public release. However, NERC will provide the option for Regional Entities to ask for help and advice in advance of filing Notices of Confirmed Violation, Notices of Penalty, Settlement Agreement, and Mitigation Plans with NERC, as noted in C.2.g. above, with the objective, among other things, of promoting consistency in penalty determinations.

Regional Entities and NERC are applying the *Sanction Guidelines* which FERC approved, including the penalty ranges and the Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) for each standard (some of which FERC has changed from NERC’s original proposals); further, each penalty proposed by a Regional Entity is reviewed by NERC and ultimately by FERC. Finally, to date, no entity that has been assessed a penalty by a Regional Entity has disputed the amount through the Regional Entity hearing process, at NERC, or at FERC.

Each of the Notices of Alleged Violation and Proposed Penalty or Sanction describes the basis for the penalty imposed (including a \$0 penalty), including the base penalty range and consideration of applicable mitigating and aggravating factors, as provided for in the *Sanction Guidelines*.

NERC does not agree that excessive penalties have been issued for documentation errors or minor administrative violations. In most cases, these violations have been assessed zero dollar penalties.

Specific NERC Actions

- a. Conduct a policy-level review of the Sanction Guidelines and address improvements in the penalty determination process.
- b. Implement the option for Regional Entities to request earlier NERC involvement in the development of Notices of Alleged Violation and Proposed Penalty or Sanction, or of settlement offers to be proffered to registered entities, prior to issuing those notices and offers to registered entities.

**11. *Improve system for submitting compliance information.***

Stakeholders commented that NERC should encourage consistency in the tools and forms used by the Regional Entities, and require all Regions to use the same portal for reporting/submitted compliance information. Stakeholders added the design of the NERC and Regional Entity submittal systems (portals) does not allow entities to prepare drafts of submittals and circulate them for review, comment, editing and approval within the entity before submission. Portals should allow the user to close and save a draft, return later to make changes, and save copies after they are submitted. Also, stakeholders commented that NERC uses electronic forms that do not allow the marking of confidential information. Finally, stakeholders indicated that, in many instances, Regional Entities do not provide notices of acceptance or acknowledgements of receipt of information submittals including self-certifications and self-reports.

Discussion of Comments

NERC has requested the Regional Entities develop and implement common forms for each type of report that is required to be submitted by registered entities on their respective reporting systems, and has given the Regional Entities common input specifications for the data and information that Regional Entities provide to NERC.

Also, NERC is working on a new database and query system that will improve the overall submittal, analysis, and reporting of compliance information.

Specific NERC Actions

- a. Complete the development and implementation of the new database entry and query system.
- b. Complete implementation of common report forms within the Regional Entities and common input specifications.
- c. Amend the delegation agreements as appropriate to accommodate and support the proposed changes regarding common report forms and common input specifications.

**12. *Data retention requirements in compliance audit scopes conflict with those in reliability standards.***

One Regional Entity commented that the data retention requirements in compliance audit scopes, as defined in the CMEP (Section 3.1.4) conflict with the implementation plan language included in certain reliability standards. As a result, the registered entities and the Regional Entity compliance staff are unclear as to what is enforceable in terms of the time period monitored. Revisions to the CMEP, ROP, and/or implementation plans are needed to eliminate this inconsistency.

Discussion of Comments

NERC agrees that this issue needs to be addressed and the inconsistency resolved. NERC Compliance Process Bulletin #2009-005 “Current In-Force Document Data Retention Requirements for Registered Entities,” Version 2.0, June 29, 2009, states, in part:

Registered entities are expected to have sufficient documentation and evidence available to demonstrate compliance with the approved NERC reliability standards. The audit period is typically every three or six years. Investigations resulting from complaints or events will require that historical documents be provided.

Certain NERC reliability standards contain provisions relating to document retention. In some cases, the document retention period is less than the three or six-year period. Such provisions were established where an undue burden existed due to the volume of the data or information required. However, there are others that do not relate to the volume of data or information required. For example, certain NERC reliability standards require retention only of the current, in-force version of a policy, plan procedure, or other singular document.

Specific NERC Actions

- a. Identify which reliability standards contain provisions related to document retention that are inconsistent with the CMEP and Rules of Procedure and initiate revisions to those reliability standards.
- b. In conjunction with the Regional Entities, communicate with registered entities the provisions contained in Compliance Process Bulletin #2009-005: “Current In-Force Document Data Retention requirements for Registered Entities.”

**13. *Maintaining compliance with CIP reliability standards while providing critical energy infrastructure documentation to compliance teams.***

One Regional Entity indicated there have been several registered entities that have expressed concern that if they turn over their critical energy infrastructure documentation to compliance staff, that they will violate their own procedures that are developed in compliance to several CIP reliability standards. This potential conflict should be reviewed and resolved so registered entities can be given assurance that they will not be held in violation of CIP reliability standards

if they provide critical energy infrastructure documentation to Regional Entity compliance staff for compliance monitoring purposes.

Discussion of Compliance

NERC has provided guidance to registered entities and Regional Entities on this issue. NERC's view is that the Regional Entity should review the data on site and leave it with the registered entity in a sealed Tyvek envelope with a seal over the flap signed by everyone on the audit team and the registered entity. That way, the documentation is available if it is needed later and does not violate the registered entity's CIP requirements. This is a standard chain of custody type procedure. NERC is drafting a formal procedure for this for use throughout NERC. NERC is also evaluating whether it should implement a secure portal for receiving critical energy infrastructure information, similar to what the NRC has implemented. This evaluation is in a preliminary stage.

Specific NERC Actions

- a. Complete the development of a formal procedure describing how compliance audit teams will treat critical energy infrastructure information.
- b. Continue evaluation of a secure portal at NERC for receiving critical energy infrastructure information from registered entities.

## D. Event Analysis and Information Exchange

### 1. *Backlog of final event analysis reports delays dissemination of lessons learned to the industry; consider interim reports.*

Stakeholders commented that the backlog in completion of event analyses (e.g., MRO Separation Event — September 2007, and Florida System Disturbance — February 2008) has delayed implementation of lessons learned by the industry to enhance reliability. The pace of publication of event analyses has slowed. The reports are detailed, but the time spent compiling them limits their effectiveness to the industry. Analyses should be completed and reported in 1–2 months, like in the nuclear industry, not 1–2 years. A process of issuing interim recommendations should be considered. Stakeholders also suggested that the slow pace of production of Event Analysis reports was due to (i) event analyses being conducted on occurrences that do not warrant an event analysis, thereby over-taxing resources (see issue 2 below), and/or (ii) not using expert consultant/contractor resources to assist in achieving more rapid completion of event analyses (see issue 3 below).

#### Discussion of Comments

The Event Analysis and Information Exchange Program currently lacks sufficient staff resources to conduct and complete all the event analyses that have been determined to be necessary in a more expeditious manner. While there are open budgeted positions in the 2009 budget, it has been difficult to find the kind of highly experienced candidates needed to conduct these analyses. NERC is currently working with the Regional Entity event analysis personnel through a new Event Analysis Coordinating Group to leverage these resources.

#### Specific NERC Actions

- a. Revise the event analysis process to include interim reports for detailed event analyses that are expected to take more than 3 months to complete.
- b. Revise the event analysis process to issue alerts as they are developed during the course of the analyses as circumstances warrant.
- c. Complete hiring to fill open budgeted positions.

### 2. *Establish threshold criteria for which events will be analyzed.*

Stakeholders recommended that threshold criteria be established for determining what events will be analyzed. Stakeholders commented that event analyses are being conducted on occurrences that are not significant to warrant an event analysis.

#### Discussion of Comments

NERC event analysis has such criteria for determining what events are analyzed, and continues to review these criteria for possible improvements. The criteria was presented and discussed at the March 2009 NERC Operating Committee meeting; additional comments will be solicited from the Planning Committee and Operating Reliability Subcommittee.

Many events need to be analyzed, not just the catastrophic ones, to learn lessons that may enable registered entities to prevent major events. If NERC analyzes only the catastrophic events, opportunities will be missed to improve reliability by learning from weaker indicators to avoid the large events.

Specific NERC Actions

- a. Review existing threshold criteria for possible revision. [By July 2009]

**3. Use root-cause analysis experts (staff or consultants) to expedite analyses.**

Stakeholders commented that NERC should contract with professional root-cause consultants or hire people with root-cause experience to conduct the formal analyses and complete them more quickly.

Discussion of Comments

The use of contractors for root cause analysis work is currently included in the event analysis procedure. A proposal for root cause analysis training of NERC and Regional Entity event analysis staff has been proposed for inclusion in the 2010 Budget.

Specific NERC Actions

- a. Use contractors for root-cause analysis in event analyses, as needed and as budget allows.
- b. Include a budget item in the 2010 budget for root-cause analysis training of NERC and Regional Entity event analysis staff.

**4. Some recommendations to industry assume the cause of an individual event represents a general practice.**

Stakeholders commented that recommendations coming out of event analyses are not useful for the most part because they are based on incorrect assumptions that the causes of the events represent a general practice in the industry.

Discussion of Comments

Recommendations and lessons learned for specific event analyses are presented in the associated reports for each event. Information in alerts can be based on a finding from a single event or on several events where a similar cause is identified. There is no assumption in either case that the information included in the alert is describing a general practice in the industry, but rather is pointing out the cause of individual or multiple events that NERC believes the industry should be made aware of. Recipients need to review the information provided and determine whether the cause or circumstances described are relevant to their own operations or practices.

Specific NERC Actions

- a. Make clear in alerts whether the basis for an alert is derived from a single event, trends seen in multiple events, technical findings from analyses, or generic equipment problems.

**5. *Include more detail in alerts.***

Stakeholder comments indicated a concern that alerts do not contain enough detail or lessons learned information to enable the industry to determine the scope and appropriate actions to take.

Discussion of Comments

In some cases, the information included in alerts must include less detail in order to protect the confidentiality of the entity or entities involved. In other cases, divulging too much detail would create a risk to critical infrastructure.

Specific NERC Actions

- a. Additional detail will be added to alerts, where warranted, through hot links in the alert to controlled access portals in the new Secure Alerts System to avoid compromising critical infrastructure information.

**6. *Separate event analyses from CVIs to eliminate the prosecutorial presumption of violation aspects from event analyses.***

Stakeholders commented that when a CVI is initiated at almost the same time as an event analysis, it inhibits entities from being open in discussing what happened in the event due to fear of self incrimination. This chilling effect is reinforced when it appears that every event results in a CVI, due to the apparent attitude of the ERO and regulators that “there must have been a compliance violation here and we’re going to find it.”

Stakeholders commented on the perception that event analyses are inappropriately becoming “fishing expeditions” for compliance violations, and deviating from the original scope of the program, which was to conduct forensic analyses of events and system disturbances in order for industry participants to learn from these episodes and improve their planning and operations.

Some commenters suggested establishing a group within NERC with a role comparable to the National Transportation Safety Board whose sole responsibility would be to investigate incidents and events to determine and report on causes without assessing blame or responsibility.

Discussion of Comments

A CVI can take advantage of data and information gathered during an event analysis rather than undertaking a separate (and duplicative) collection of information. However, there are times when it may be necessary to initiate a CVI in parallel with an event analysis; e.g., when the event is a Category 4 or 5 with severe consequences and significant regulatory attention, or when it is



necessary to require the preservation of data and information that may be needed for determining whether any violations occurred but that may otherwise be lost due to the passage of time. NERC agrees it should consider developing more explicit procedures for the interface and coordination between event analyses and CVIs so as to keep open the exchange of information about an event that is essential for improving reliability through feedback to the industry.

Specific NERC Actions

- a. Review and expand existing procedures to clarify the interface between event analyses and CVIs with the objective of preserving and promoting, in event analyses, the open exchange of information necessary for feedback to the industry for purposes of reliability improvement.

## E. Reliability Assessment

### 1. *Assessment reports need to avoid taking policy advocacy positions and include more support from well-researched information.*

Stakeholders commented that NERC should avoid taking policy advocacy positions in its reliability assessments and that some of its conclusions are not based on well-researched data and information.

#### Discussion of Comments

NERC remains committed to providing independent and unbiased assessments of the reliability of the bulk power system. NERC takes no advocacy position on any particular policy, technology, or industry practice but reserves the right to provide timely, accurate, and unequivocal positions on matters that directly impact the reliability of the system. Often, these matters are relevant to many political entities at different levels, but that should not prevent NERC from taking a measured position supportive of increased system reliability.

The conclusions presented in reliability assessments represent the work of NERC staff and its stakeholders. Every effort is made to ensure accuracy, completeness, and a lack of bias. NERC benefits from many valuable contributions from its stakeholders and augments these viewpoints with external information and many years of NERC staff experience. NERC strives to present fact-based, thoroughly researched, and consensus-driven material, but occasionally it must either rely on a narrower base of specialized information that may not satisfy some stakeholders or represent all viewpoints, or provide its independent assertions based on the data and information provided.

#### Specific NERC Actions

- a. Investigate and validate assumptions, data, and conclusions in future reliability assessments to ensure that they line-up with data or information provided by the Regional Entities and/or Planning Committee and its subgroups.
  - b. NERC will avoid taking policy advocacy positions in its reliability assessments.
- ### 2. *Improve reliability assessment metrics including their definition, calculations, and granularity, along with the transparency and process used to incorporate NERC comments into Regional self assessments.*

Stakeholders suggest NERC needs to make improvements in its metrics, definition, granularity, and methods used to calculate the reliability assessments. Comments also reflect concern about the lack of a clear and transparent process on how NERC develops its independent assessment of the Regions, along with data gathered from other sources, which can lead to differences between Regional self assessments, and the overall NERC assessment. In addition, the stakeholders suggest presentation of data/information by interconnection.

Discussion of Comments

NERC continually strives to develop the best metrics, provide clear and concise term definitions, and champion the best assessment methods. The ever-changing nature of the electric power industry provides a rich source of historical practices combined with cutting-edge technology that NERC leverages at every opportunity through committees, working groups, and task forces. Through the several subgroups that contribute to its reliability assessments, NERC ensures continual review and improvement of its practices and provides the industry with meaningful metrics that address the many facets of the bulk power system.

NERC staff works closely with the Regional Entities and other stakeholders to incorporate comments into the self-assessments, but recognizes that this is an area where improvement is possible. It is NERC's intention to provide Reliability Assessments that are accurate, complete, and transparent. Both NERC staff and NERC committees individually report to NERC's independent Board of Trustees. NERC staff and the Planning Committee (with support from the Operating Committee) provide an industry balance to ensure the independence and comprehensiveness of the reliability assessment process.

Specific NERC Actions

- a. Reorganize its Long-Term Reliability Assessment (LTRA) to better reflect the interconnections while respecting the boundaries of the NERC Regions.
- b. Refine NERC's peer review process, ensuring that comments of NERC and other Regional representatives are reflected in reliability assessments. Ensure industry representatives will have ample opportunity to voice their comments on the entire report.
- c. Engage NERC's Reliability Metrics Working Group, to vet, validate, and improve the metrics used in reliability assessment reports.

**3. *Recognize state-mandated capacity procurement requirements in assessments.***

Stakeholders commented that NERC's assessments need to recognize state-mandated capacity procurement requirements.

Discussion of Comments

State or provincially mandated capacity requirements present notable operational and planning parameters for NERC stakeholders; however, incorporating capacity requirements for 48 U.S. states and 8 Canadian provinces may distract from the high-level Regional view NERC desires to present. While NERC captures most of this data, it is not complete as bulk power system boundaries do not conform to political boundaries.

Specific NERC Actions

- a. Consider including, in NERC's Reliability Assessment Guidebook, that Regional self-assessments acknowledge the existence of state/provincial mandated capacity

requirements, where they exist, as well as address reliability issues beyond the current ten-year assessment horizon.

**4. *Expand the long term assessment beyond the present 10-year horizon.***

Stakeholders commented that NERC, along with Regional Entities, should evaluate expansion of the LTRA beyond its present ten-year horizon to support the longer-term planning of a backbone transmission system and evaluate impacts of technology deployments to address emerging industry concerns.

Discussion of Comments

The 10-year horizon of the LTRA is consistent with industry and historical practices offering a reasonable forecast horizon for planning purposes. However, several emerging issues which have the potential to impact the bulk power system reliability may require a longer view. For example, transmission planning, the integration of high levels of variable generation, smart grid technologies, and the impact of climate change initiatives all will require a longer view, perhaps up to 20 years.

Specific NERC Actions

- a. With the NERC Planning Committee and the Reliability Assessment Subcommittee, study the suggestion of increasing the horizon of the LTRA beyond 10 years in light of increased interest in reducing greenhouse gases through renewable portfolio standards, other climate change initiatives, and related state, provincial, and national policies that are driving change in the industry.
- b. The special task force which studied the issue of accommodating high levels of variable generation is also a vehicle to study and make recommendations on issues that involve these longer-time horizon issues.
- c. Other matters requiring a longer view will be reviewed on a case-by-case basis.

**5. *Expand NERC's data gathering to include more bulk power system entities for a more complete set of interconnection information: also reduce amount of data being collected.***

Stakeholders commented that NERC's approach for gathering information for its assessments fails to capture data from merchant generators, which can lead to incomplete data for reliability and adequacy assessments. Several comments also addressed concerns about the burden from NERC resulting from data and information collection for its assessments.

Discussion of Comments

Vertically-integrated utilities are generally large enough to support internal staff efforts that directly support NERC efforts to gather timely and accurate data. NERC recognizes the changing nature of the electric power industry will likely continue to include more entities other than large-scale vertically-integrated utilities and it has made efforts to include these other

entities in its process. For instance, NERC staff has begun efforts to engage Regional Entities, sub-Regional Entity groups, and industry organizations to increase the visibility of NERC reliability assessments and to listen to a broader spectrum of input. These collaborative efforts have been mutually beneficial to date and NERC will increase this engagement to ensure all stakeholders of the bulk power system can be heard.

NERC recognizes the burden of supplying data and information. NERC works diligently to reduce the amount of effort required to collect this data and strives to prevent redundant efforts. However, the increasing complexity of the industry and a need to understand the impacts of emerging issues, combined with a broad interest in obtaining timely and detailed data, dictates that NERC request a substantial amount of data and information. To be successful, the level of data detail, the level of effort required collecting the data, and the usefulness of the resulting metrics must be balanced. NERC welcomes stakeholder support to develop methods to reduce the burden of collecting data and information — especially since more, rather than less, data will be needed as NERC continually strives to gain deeper awareness and visibility of the reliability of bulk power system.

#### Specific NERC Actions

- a. Staff will engage Regional stakeholder working groups as they develop the Regional assessments.
- b. Coordinate with EIA and FERC to minimize or eliminate duplicative reporting and data collection requirements.
- c. Form a high-level industry group (Data Coordination Subcommittee), under the direction of NERC's Planning Committee to focus on data collection, coordination, and substantiation.

#### **6. *Share reliability and adequacy assessments through Web-based tools.***

Stakeholders commented that NERC should share its reliability and adequacy assessments with stakeholders more effectively through Web-based tools.

#### Discussion of Comments

Information sharing and transparency are very important NERC objectives. NERC is committed to efficiently and cost-effectively engage its stakeholders with outreach, Web-based tools, and Webinars. To further increase the robustness and transparency in its annual ten-year reliability assessments, NERC sponsors public workshops, with industry experts and participants, to discuss preliminary findings, identify industry concerns, explore emerging issues, and solicit improvements. More information from previously held workshops is available at: [http://www.nerc.com/filez/ltra\\_workshop.html](http://www.nerc.com/filez/ltra_workshop.html).

#### Specific NERC Actions

- a. Expand NERC's use of Webinars and other Web-based approaches to more effectively share the results and gather input from stakeholders of NERC's reliability assessment reports.

7. *Conduct “scenario assessments” for NERC’s LTRA.*

Regional Entities, through the NERC Reliability Assessment Subcommittee, have recommended a “Scenario Assessment” be performed in 2009 for NERC’s LTRA. This assessment will allow each Region to develop a scenario in addition to their reference cases.

Discussion of Comments

NERC concurs with this suggestion, which mirrors the current processes in place as a result of the reliability assessment improvement plan. Going forward, the NERC Planning Committee will determine the need and subjects of future scenario analysis on an annual basis.

Specific NERC Actions

- a. Continue with the processes outlined in the reliability assessment improvement plan.

## F. Performance Analysis and Metrics

### 1. *Improve process for data collection.*

Stakeholders commented that a defined process is needed for implementation of NERC ROP Section 1600 that addresses data collection, including the role of owners, operators, and users in determining need. Comments also indicated that present NERC proposals for metrics will not produce data on a periodicity that is timely enough to drive process improvement.

#### Discussion of Comments

NERC is proposing to develop a centralized data collection process and the tool needed to automate the collection and reporting processes. The tool will support frequent updates (now limited to quarterly) and provide a user query feature to call different views of the reliability “dashboard” that is database driven, rather than the static files employed today. The processes will integrate substantial amounts of additional data required for metric developments into existing NERC databases along with reliability dashboard maintenance.

The Reliability Metrics Working Group (RMWG)<sup>4</sup> has proposed a set of preliminary metrics. NERC currently does not have suitable historic or forecast data for several of the proposed metrics (for example, relay and control system performance, generation voltage schedules, and Interconnection Reliability Operating Limit (IROL) exceeded.) NERC is working with the RMWG to determine how best to collect the data for these proposed metrics.

#### Specific NERC Actions

- a. Develop a centralized automated data collection, reporting and validation process, and calculation tools to support reliability metrics.

### 2. *Develop only those metrics critical to bulk power system reliability.*

Stakeholders commented that metrics (for which data must be collected from entities) should be justified on the basis of being benchmarks critical to bulk power system reliability (rather than just “good to have”) before data collection starts.

#### Discussion of Comments

NERC had independently developed metrics as indicators of bulk power system reliability. In the past for a variety of reasons, these metrics had not been vetted by NERC’s stakeholders.

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<sup>4</sup> NERC’s Planning Committee formed the Reliability Metrics Working Group, in early 2008, to advise and support the needs of the metrics and benchmarking program. The scope of the group is to develop general metrics for the characteristics of an Adequate Level of Reliability, identify data collection and reporting guidelines, and recommend a metrics implementation plan.

A recently formed stakeholder group, the Reliability Metrics Working Group (RMWG), which supports NERC's Performance Analysis and Benchmarking Program, has developed a rigorous metric selection process. This process identifies key measures of the bulk power system Adequate Level of Reliability.<sup>5</sup> In March 2009, the RMWG proposed 12 reliability metrics addressing the six characteristics of the Adequate Level of Reliability definition. The metrics proposed by the RMWG will be integrated with NERC's existing metrics. Where proposed metrics are found to be more suitable to address bulk power system reliability than existing ones, the existing metrics will be replaced by the proposed metrics.

#### Specific NERC Actions

- a. Calculate metrics identified as key indicators of bulk power system reliability, measured against the six characteristics of the ALR.
  - b. Vet metric development, collection, and analysis with industry stakeholders through the Reliability Metrics Working Group.
3. ***Consider what metrics Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs) already have developed.***

Stakeholders suggest that before starting data collection for new metrics/benchmarks, NERC should see if existing Regional, ISO, or RTO metrics address the proposed NERC metrics.

#### Discussion of Comments

NERC staff and the RMWG have created an open process to actively seek metric input from all stakeholders. Fifteen committees and subgroups were approached in April and May 2009, including the Reliability Coordinator Working Group, to solicit their recommendations on which metrics should be maintained and tracked. The metrics proposed by these groups will be compared to existing metrics, prioritized, and integrated into those already identified. Where proposed metrics are found to be superior to existing ones, the existing metrics will be replaced.

#### Specific NERC Actions

- a. Continue to call for metrics submittals from NERC's committees and subgroups and all NERC stakeholders.
- b. Submitted metrics will be assessed by the RMWG on an ongoing basis as a vehicle for continuous improvement of the metric development, deployment, and retirement process.

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<sup>5</sup> [http://www.nerc.com/files/Adequate\\_Level\\_of\\_Reliability\\_Defintion\\_05052008.pdf](http://www.nerc.com/files/Adequate_Level_of_Reliability_Defintion_05052008.pdf)



#### 4. *More dissemination of metrics to industry.*

Stakeholders commented that the dissemination of metrics information needs to be enhanced so meaningful metrics can be used for benchmarking performance and improving the reliability of the bulk power system.

##### Discussion of Comments

NERC launched the benchmarking dashboard on [www.nerc.com](http://www.nerc.com) in July 2008 to fulfill a commitment in NERC's ROP to raise awareness of reliability performance through an online portal. The dashboard provides a high-level overview of key reliability metrics and trends, and highlights areas of concern, and has been updated quarterly starting in 2009.

The first-ever assessment of reliability performance included in the 2008 *Long-Term Reliability Assessment* represented an initial step towards an annual analysis of bulk power system performance trends.

In March 2009, NERC's CEO Rick Sergel highlighted the initial results of one of NERC's efforts to ensure the reliability of the bulk power system in North America and the current set of reliability performance benchmarks and metrics. In his letter,<sup>6</sup> Mr. Sergel highlighted metrics that supported leading indicators and benchmarks such as bulk power system disturbances, energy emergency alerts, and vegetation related transmission outages.

##### Specific NERC Actions

- a. NERC will work with the RMWG to issue the first annual reliability performance report in 2010 for the 2007–2009 timeframe and share metric analysis results through its quarterly updates on NERC's website, NERC News, and via Webinars.

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<sup>6</sup> [http://www.nerc.com/fileUploads/File/News/benchmarking-letter\\_31Mar09.pdf](http://www.nerc.com/fileUploads/File/News/benchmarking-letter_31Mar09.pdf)

## G. Critical Infrastructure Protection

### *1. Centralize direction for implementation of Critical Infrastructure Protection (CIP) reliability standards at NERC rather than allowing Regional Entities to engage in their own efforts.*

Stakeholders commented that direction for implementation of CIP reliability standards thus far has been disappointing and should be centralized at NERC. Comments also suggested that a NERC-sponsored nationwide approach would be more efficient and ensure consistency. Allowing the Regions to engage in their own efforts without stronger direction can result in an inconsistent set of approaches to enforcing the CIP reliability standards.

#### Discussion of Comments

NERC recognizes a need for improvement in this area and is committed to continuous improvement in CIP implementation. NERC's efforts regarding training will facilitate a more informed and uniform implementation of CIP across all of the Regions.

Internally these efforts include working across NERC's various program areas to provide enhanced auditor training. The enhanced training is designed to improve auditor capability, and provide guidance on consistent implementation.

NERC staff is also working with industry subject matter expert volunteers to provide additional industry requested guidance for meeting the directives found in FERC's Order 706. This guidance is intended to show NERC's commitment to improved industry communication and outreach to registered entities.

#### Specific NERC Actions

NERC has further resourced a training effort designed to help the auditors and registered entities to effectively comply with CIP reliability standards. This enhanced training is designed for both the auditor community and the registered entity community.

- a. Develop and deliver the CIP fundamentals course to NERC and Regional Entity compliance auditors. This will help provide a cross-Regional and NERC-wide level base of understanding of both CIP's fundamentals and the auditor responsibilities.
- b. Develop CIP fundamentals educational material for industry participants. This effort targets the individuals within the industry who are responsible for implementing the CIP standards and will lead to a more uniform understanding of implementation issues.
- c. Develop and deliver advanced skills training for auditors to improve their performance, including CIP knowledge and soft-skills applications. This more advanced training will again help ensure uniformity across all NERC Regions in the auditing role.

2. *More timely guidance on implementation of CIP reliability standards, especially for the identification of Critical Cyber Assets using risk-based methodologies; place greater reliance on technical committees.*

Stakeholders commented that the approach to cyber security is disorganized, inefficient, expensive, and unrealistic as a result of undue pressure applied by the U.S. Government and FERC. Comments also indicated that more timely development of guidance on implementation of CIP reliability standards is needed, with greater reliance placed on NERC technical committees and working groups. Information provided to-date has not been as helpful as it could be. Stakeholders also commented that NERC has not produced guidelines for an appropriate risk-based methodology for identifying Critical Assets/Critical Cyber Assets (CIP-002) and has no timeline for producing such guidance. Guidance documents should be developed for other CIP reliability standards as well.

#### Discussion of Comments

NERC exists to establish reliability standards supported by broad stakeholder expertise and that are responsive to mandates from governmental authorities. The balance of influence makes the reliability standards development process functional. NERC Staff recognizes the pressures and influences from the government and stakeholder communities.

NERC agrees with the comments that NERC's approach to cyber security has been disorganized and that this has led to inefficiencies and expenses in some cases. The NERC approach to dealing with cyber security has been rapidly evolving over the past several months. Recent additions to NERC staff are anticipated to help align the NERC process and alleviate some resource constraints.

NERC staff generally agrees with the comments for more timely production of guidance documents.

#### Specific NERC Actions

- a. NERC CIP and standards staff is taking aggressive efforts and providing specialized support to the Project 2008-06 Cyber Security Order 706 standard drafting team. This is a multiple-phase project in which NERC staff will work closely with the Cyber Security Order 706 standard drafting team to expeditiously complete work on revisions to CIP-002 through 009 reliability standards.
  - i. The first phase (Phase I) of the project proposes Version 2 CIP-002 thru CIP-009 reliability standards to primarily address the FERC directive to remove the phrase "reasonable business judgment," but it also includes a number of other revisions to the same set of reliability standards. The revised CIP standards resulting from Phase I were adopted by the NERC Board of Trustees on May 6, 2009, and filed with the Commission for approval on May 22, 2009.
  - ii. The second phase (Phase II) of the project will be much more complex and will involve drafting Version 3 CIP-002 thru CIP-009 reliability standards; proposing how to best address the other directives in FERC Order No. 706. Consideration

will be given to the applicable features of the NIST standard framework described in NIST 800-53 as well as the identification of what cyber equipment should be addressed by the CIP reliability standards.

- b. Work with the Critical Infrastructure Protection Committee (CIPC) to expeditiously finalize the development and issuance of guidelines on the implementation of CIP reliability standards, especially for the identification of Critical Assets and Critical Cyber Assets using risk-based methodologies.

CIPC's Security Guideline Working Group (SCWG) document on identification of Critical Assets was presented at the March 2009 CIPC meeting and was unanimously approved for posting to solicit industry comments. The SCWG is currently reviewing the comments received on the posted draft and plans to develop a revised document for consideration for approval by CIPC in September 2009. SCWG's document on identification of Critical Cyber Assets has been sent to CIPC for comment. It will also be posted for industry comment and is expected to CIPC for approval in December 2009. Following approval by CIPC, these guidelines will be submitted to the NERC Standards Committee for posting as a reference document associated with CIP standards. NERC will continue to participate with the guideline standard drafting team to resolve any industry comments received during this markup process and support the CIPC in completing the guideline development and approval process.

### **3. *Need for Technical Feasibility Exceptions (TFEs).***

Stakeholders commented that NERC has not established a process or procedure for a registered entity that is subject to reliability standards CIP-002 through CIP-009 to rely on a TFE to actions specified in the requirements of these reliability standards, as contemplated by the Commission's Order No. 706.

#### Discussion of Comments

FERC Order No. 706 mandated a requirement to develop and implement a process for dealing with TFEs. The standard drafting team for Project 2008-06 Cyber Security Order 706 discussed this FERC mandate and decided it was necessary to provide the industry with a procedure for relying on a TFE to certain requirements within the CIP-002 through CIP-009 reliability standards. NERC staff, working with these industry experts, then devised a process to satisfy these requirements from Order 706. The proposed procedure was posted for industry comment from March 16–April 30, 2009. NERC is currently working with the Regional Entities to determine whether TFE requests should be reviewed by NERC, the applicable Regional Entity, or both. Adoption of a procedure as a NERC ROP will require approval of the NERC Board of Trustees and then of FERC.

#### Specific NERC Actions

- a. Finalize "Procedure for Requesting and Receiving Technical Feasibility Exception to NERC Critical Infrastructure Protection Standards" based on a review of comments to the posting, and submit it to the NERC Board of Trustees and FERC for approval as amendments to the NERC ROP.

#### **4. *Need a fast-track process for interpretation requests for CIP reliability standards***

Stakeholders commented that there should be a fast-track process for interpretation requests relating to CIP reliability standards.

##### Discussion of Comments

NERC agrees with stakeholder comments and understands the development of a fast-track process for interpretation requests associated with CIP reliability standards will require the combined efforts of the reliability standards, compliance, and CIP programs. The development of improved guidance documents related to the implementation of CIP reliability standards and the revisions to these reliability standards that are underway should help reduce the need for interpretations.

##### Specific NERC Actions

- a. Work with the reliability standards and compliance monitoring and enforcement programs to consider how to “fast-track” the development of interpretations to CIP reliability standards.
- b. Evaluate the possibility of, and if determined to be appropriate, implement, a CIP reliability standards hotline or other assistance function similar to the assistance functions provided by other regulatory and self-regulatory organizations (e.g., NRC, FINRA, etc.) to address CIP reliability standards questions.

#### **5. *Cyber security alerts insufficiently targeted and lack detail.***

Stakeholders commented that cyber security advisories are insufficiently targeted to functional elements of the industry and lack detail. Comments also indicated transparent processes do not exist for how threats and vulnerabilities are evaluated and prioritized. Additionally, stakeholders commented that compliance contacts are not being utilized as originally intended and cyber security alerts should not be sent to the registered entity’s regular compliance contact, particularly in light of the requirement to acknowledge receipt of certain alerts within 24 hours and the possibly time-sensitive nature of information provided in some alerts, since the regular compliance contacts may not provide 24 X 7 coverage.

##### Discussion of Comments

NERC agrees that past cyber security advisories had issues in both level of detail and in targeting. Getting the targeting issue resolved is the goal of the NERC Secure Alerting and Notification System (NSANS). Getting the level of detail right is the goal of a newly formed group called Hydra. Hydra is a program that identifies and manages security knowledge resources and weaves them into the fabric of the Electricity Sector’s Information Sharing and Analysis Center’s (ES-ISAC) business practices and workflow. Together both the content, level of detail obtained via Hydra, and the target audience delivery, executed via the NSANS application, will be substantially improve the overall cyber security alert process. In addition,

the specific targeting ability of the NSANS system allows the burden placed onto the compliance point of contact to be redirected to more appropriate personnel.

Specific NERC Actions

- a. Complete the implementation of the NSANS that will give the ES-ISAC/NERC the power to alert and notify registered entities of the bulk power system, and other utilities of the electricity sector, of vulnerabilities, threats, and/or abnormal events/conditions, or other significant events that may impact the bulk power system.
- b. Continue to develop the Hydra group and functionality and its use on emerging cyber security assessments.
- c. Utilize the personnel targeting features of the NSANS to eliminate the burden applied to the compliance point of contact.

## H. Situation Awareness

### I. *Real-time situation awareness is outside of NERC's scope.*

Stakeholder comments suggested that real-time situation awareness is outside of NERC's scope, duplicative of the Reliability Coordinator function, adds expense, and NERC participation, particularly during emergency situations, is not helpful or appropriate and may jeopardize reliability. However, stakeholders also commented that the legacy NERC Reliability Toolbox (IDC, ISN, electronic tagging, SDX, RCIS, book of flowgates, NERC factor viewer, and Reliability Coordinator hotline) are strongly supported by bulk power system owners, operators, and users and should be continued.

#### Discussion of Comments

NERC's application to FERC to be certified as the Electric Reliability Organization (ERO) included a provision for NERC to develop and provide situation awareness (SA) for the bulk power interconnections in North America. This program was included as an ERO function because of the findings and recommendations of the U.S.-Canada Power System Outage Task Force. The task force found the lack of situation awareness was one of four causes of the August 14, 2003 blackout. NERC's application addressed this by committing NERC to provide SA as the ERO.

NERC's ROP, Section 1000 states the requirements for NERC to monitor present conditions on the bulk power system and provide leadership coordination, technical expertise, and assistance to the industry in responding to events as necessary. NERC has developed its SA program, as the only organization positioned to develop a picture of what is occurring across the separate interconnects of the bulk power system in North America. This allows NERC to supply appropriate information to government agencies in the United States and Canada, and respond to questions from the agencies with the goal of limiting the distractions of direct calls to system operators. NERC also has obligations to supply bulk power system information to the NRC and International Power Line information to Canada's National Energy Board (NEB).

As a critical component of its SA function, NERC serves as the ES-ISAC. Each critical infrastructure industry has established an ISAC to communicate with its members, its government partners, and other ISACs about threat indications, vulnerabilities, and protective strategies. ISACs work together to better understand cross-industry dependencies and account for them in emergency response planning. All entities in the electricity sector are participants in the ES-ISAC.

NERC is increasing its focus on SA functions by implementing a functioning SA system. NERC is identifying the necessary requirements and devising a feasible technical approach and system architecture that will enable NERC and regulatory authorities and organizations to securely tap into participating Reliability Coordinators (RC) to visualize conditions occurring on the bulk power system. The project team, named Situation Awareness for FERC, NERC, and the Regions, or SAFNR, is working to enable 100 percent of the RCs in the United States to display interconnection-wide system conditions on a near real-time basis to FERC, NERC, and the

Regional Entities. This will be accomplished through internet-based systems that will provide visual displays for FERC, NERC, and the Regional Entities while all the data will reside at the RCs.

NERC's primary SA function is to provide information to regulators so the RC does not have to be distracted by doing that; therefore, NERC's SA activities actually enable the RC to focus on performance of its responsibilities. Additionally, completion of the SAFNR project will enable FERC, NERC, and the Regional Entities to obtain near real-time information directly from the RCs without having to interfere with the RC's activities by requesting and requiring them to provide the information.

FERC believes it is critical for FERC, NERC as the ERO, the Regional Entities, and the RCs to be able to all observe the same RC monitoring displays and data on a near real-time basis throughout the interconnections in the United States. Industry is best served by presenting an accurate view of system conditions, with NERC and the Regional Entities taking the responsibility of servicing information requests so that RCs can concentrate on their operating reliability responsibilities. In this way, NERC's SA functions add value and help enhance the reliability of the bulk power system. No reliability responsibilities will be shared or displaced from the RCs upon completion of this project. Thus, NERC's SA functions, as described above, are not duplicative of the functions performed by RCs during emergency situations. The SAFNR project will benefit the regulatory community by allowing regulatory groups (although a restricted audience of FERC, NERC, and Regional Entities) to observe and comprehend the SAFNR project-specific monitoring displays and specified core data within the RC's geographical footprints in the United States. The NERC Board of Trustees Technology Committee is actively engaged in the SAFNR project and will maintain control of its future development.

With respect to the legacy NERC Reliability Toolbox, NERC is committed to improving its ability to efficiently and effectively develop and manage existing and future reliability tools. The Situation Awareness and Infrastructure Security program will work closely with NERC's Chief Information Officer and the board technology committee to implement the new framework to better manage NERC's portfolio of reliability tools. The new framework takes a "cradle to grave" approach that will require NERC to develop plans to sustain, enhance, and in some cases turn over existing tools. NERC clearly recognizes the importance of today's tools and believes new technology will provide better ways to monitor and manage the bulk power system.

#### Specific NERC Actions

- a. NERC will continue to develop its SA to meet obligations set forth in its ERO certification application and in NERC's ROP, Section 1000. In carrying out its responsibilities and obligations as the ES-ISAC, NERC will work to provide SA and facilitate emergency preparedness and response exchanges between the industry and governmental authorities as appropriate. NERC will better communicate to the industry the need for, and measure the value of SA efforts to include, the SAFNR program.
- b. NERC will continue to support and improve its ability to efficiently and effectively develop and manage existing and future reliability tools.



**2. *Define acceptable communications protocols for use during system events.***

Stakeholders commented that adequate processes and procedures have not been established to define acceptable communications protocols during system events.

Discussion of Comments

NERC agrees with these comments. NERC is establishing mechanisms for executive-level guidance and direction, reaching out to form effective industry and Regional collaborations, and increasing the resources dedicated to the operation of the ES-ISAC. NERC recognizes the need to work with industry experts in the development of an acceptable communications protocol for use during system events. NERC staff is working with the technical committees to evaluate the best approach and is developing initial communication protocols associated with the SAFNR project.

Although the ES-ISAC has been operated by NERC since 2000, it has lacked a clear governance structure and guiding charter document. NERC's Board of Trustees has formed the Electricity Sector Steering Group (ESSG) to provide executive-level guidance and strategic direction for the ES-ISAC. The ESSG was formed in the second quarter of 2008 and has conducted a number of meetings to-date. The NERC Chief Security Officer has undertaken an effort to work with CIPC to create a program charter for the ES-ISAC, and develop an Electricity Sector Coordinating Council (ESCC) charter for the ESSG to review and consider for approval in the near future.

Additionally, the ES-ISAC is maturing its processes for engaging industry experts to assist in the evaluation of security threats and vulnerabilities. NERC is evaluating technologies to improve the quality, security, and timeliness of ES-ISAC notifications.

Specific NERC Actions

- a. NERC will continue to work with the ESSG, the ES-ISAC, and NERC technical committees to develop and improve upon communications protocols for use during system events.

## I. Training, Education, and Personnel Certification

### 1. *Broaden the operator certification program to include credentials for more functions and revise the criteria for qualifying activities.*

Stakeholder comments suggested that NERC develop operator training and certification programs for all entities whose operational duties impact bulk power system reliability e.g., generator owners and operators, distribution providers involved in transmission and/or Under-Frequency Load Shedding (UFLS) issues, support staff managers, plant operators, field personnel, and Regional dispatchers. Several comments suggest the personnel conducting training should get credit towards maintaining certification for conducting the training.

Some stakeholders seek improvements or changes to the continuing education hours used to maintain a credential. These changes seek to include more qualifying activities and periodic verification that NERC-approved Continuing Education Providers are following all requirements.

#### Discussion of Comments

The certification program has met the defined needs of system operators and will seek to expand its usage among other professions in the industry. It will continue to address the quality of the activities that are acceptable to maintain a credential in order to honor the high integrity of the program and credential.

Stakeholders have requested additional credentials be developed for the industry. The Personnel Certification Governance Committee (PCGC) is currently researching the feasibility of offering an advanced system operator credential. It would be based on experience, and demonstrations of knowledge, skill, and performance. An advanced examination and simulation problem solving will form the basis of the testing, along with recognition through a nomination by supervisors or upper management.

Once this project is complete (if implemented) in 2011, the committee will research the feasibility of offering a credential for generator operators and Regional dispatchers. Past research has found that developing these credentials may prove difficult due to the smaller amount of commonalities within those audiences compared with the four current audiences of system operators. This makes developing valid, applicable testing difficult.

The second issue related to expanding the criteria, to allow more and different activities to qualify towards maintaining a credential, is under constant review. The PCGC established criteria defining what content is allowed to maintain a credential based on the job tasks a system operator performs. There are some NERC Reliability Standards and industry subject areas that are considered supplemental knowledge but are not central to the job of a system operator. Those supplemental areas are generally not approved for certification maintenance by the continuing education program. Activities also need to have a good form of feedback or testing to ensure learning takes place. That is why conferences and workshops may not always be approved. Revising criteria is always being assessed by the PCGC, but the goal will always be for operators to receive quality training and education that is directly related to their job.

No pressing changes to the certification program itself have been suggested as the exams are updated on a regular basis according to program requirements.

Specific NERC Actions

- a. Research the feasibility of offering an advanced system operator credential as well as credentials for generator operators and Regional dispatchers.
  - b. The PCGC will consider including more qualifying activities in the requirements used to maintain a credential.
2. ***Improve the current system used by system operators and training providers for tracking continuing education hours (CEH) to maintain a credential.***

Commenters suggested the need for improvement to the tracking system by allowing entity program administrators to see all courses (not just those the entity provided) to facilitate entity program administrators in tracking and maintaining records of their operators' CEH.

Discussion of Comments

The Continuing Education Program and System Operator Certification Program implemented the System Operator Certification and Continuing Education Database (SOCCED) in 2007 to track the CEH earned by operators to maintain their credentials. The initial rollout was a bare-bones functioning database that has been greatly improved upon in eight major upgrades.

The ability for another person, be it a trainer, supervisor, or administrator, to see the private certification records of a system operator has legal implications. A NERC System Operator Certification is an individual certification earned and owned by the individual. NERC currently restricts the ability of anyone else to view these private records. This creates the problem noted above, that an entity that needs to comply with PER reliability standards would like to know the certification and training status of the system operators it employs.

The PCGC is developing a solution to allow a trainer or supervisor view-only privileges to a subset of training records in the SOCCED only when specifically authorized by the system operator. No personal information will be accessible and no ability to change operator information will be allowed. This database change will occur later this year.

Specific NERC Actions

- a. Continue to improve the database used by the program, including additional functionality to allow persons designated by a certified person to view full course records that are not sensitive or confidential.

### 3. *Offer more targeted and timely education programs.*

Stakeholders commented that the loss of technical talent and failure to replenish that talent has resulted in NERC not presenting training presentations or documents of the quality it presented in past years. Other comments suggested that system operator training should focus more time on new reliability standards being implemented as well as on “most violated reliability standards” and how/why they are being violated.

Stakeholders also commented that training and education programs should be developed by NERC and the Regional Entities on reliability standards and compliance, including training for registered entities on the documentation requirements and other evidence required to demonstrate compliance with reliability standards, as well as audit-related training. Workshops to-date have not provided the necessary details on actions and documentation needed to demonstrate compliance.

Comments also indicated NERC should continue to expand use of Webinars — more frequently and on more topics — with more Web-based and electronic offerings with unlimited access to enable multiple persons from registered entities to participate.

#### Discussion of Comments

NERC continues to seek more opportunities to develop and deliver information and education to the industry. Better informed and educated participants result in a more reliably planned and operated bulk power system. Limited resources have restricted NERC’s ability to develop or deliver information and education to address reliability standards and concepts of demonstrating compliance to the reliability standards. Many have been calling upon the compliance program to provide this information, but that program does not provide this information due to concerns about potential conflicts in its role. The training and education program can provide some of the information sought by stakeholders. As more resources are made available to the training and education program, more targeted and directed education is planned for stakeholders. This education will address NERC programs, reliability standards, compliance, and reliability issues.

While NERC can directly provide some information to stakeholders, the ability to share information within the industry can also yield strong benefits. NERC is working with the standing committees to develop ways of sharing information among industry stakeholders. The Reliability Fundamentals Working Group (RFGW) of the Operating Committee is charged with using an “open source” concept to deliver and modify information relevant to the industry. NERC is working to provide the platform to accomplish and manage this charge. The result will be more timely and useful information on many topics.

#### Specific NERC Actions

- a. Add a resource to the 2010 budget to provide more targeted and timely information for stakeholders about upcoming changes to reliability standards and their compliance requirements, etc.
- b. Research a platform on which to establish an “open source” system for providing information to the industry.

- c. Work in cooperation and coordination with the Regional Entities and industry associations to determine what Webinar topics would be most beneficial for bulk power system owners, operators, and users in an effort to provide useful feedback for improving reliability.

#### ***4. Requirements for training programs and training providers.***

Stakeholders commented that the NERC training program would be more efficient if it would encompass all NERC training standards rather than requiring separate programs for continuing education that must be maintained at the entity level — comparable to other certification programs such as Project Management Institute, PMP certification, Professional Engineer certification, and CPAs. That is, NERC should certify training courses and collect and maintain records of continuing education to verify continued certification.

#### Discussion of Comments

The continuing education program has fulfilled its requirements and is moving forward to expand the reach of its positive impact on reliability. The program has continuously clarified its requirements to meet the needs of training providers and the needs of the certification program.

The certification, continuing education, and training and education programs are the result of what was acceptable in the times they were approved. The strengths and shortcomings of the programs are constantly discussed by those who lead the programs with an eye towards improvement. One proposed solution to meet the major goal of improving overall training and reliability is to accredit training programs. One initiative currently being investigated will accredit those entities which voluntarily seek to have their system operator training program accredited.

NERC will play a large role in developing voluntary training program accreditation criteria that will focus on the overall quality of a training program. Potential criteria that go beyond the current NERC PER-005 standard (System Personnel Training) and continuing education program address the performance of an operator, training program model, training effectiveness, and advanced training.

Encouraging entities to voluntarily accredit their training programs will require incentives. One potential incentive that may be considered is allowing a system operator who is receiving training in an accredited program to automatically maintain his/her credential due to the quality of the program. This also has the benefit of simplifying administration at registered entities and NERC, reducing overall costs. A white paper with more thoughts on a proposed voluntary accreditation program will be released in late 2009 for industry input and comment.

#### Specific NERC Actions

- a. Expand NERC's role in establishing accreditation criteria for training programs by releasing a white paper for comment in late 2009.

## J. Finance and Controls

### 1. *Reflecting stakeholder comments in budgets.*

Stakeholders commented that their concerns and recommendations do not appear to be considered in the NERC budget process. Comments also suggested that NERC should provide more information on the reasons for cost and headcount increases and how they provide value for members.

#### Discussion of Comments

While NERC's business plan and budget is approved by its Board of Trustees in late July or early August, the first draft is available for review and comment by stakeholders in May. As the business plan and budget is developed, NERC solicits comments and suggestions from stakeholders through public postings of drafts of the business plan and budget on its Website, by conducting an annual budget workshop and by providing the opportunity for public comments in the Board of Trustees' Finance and Audit Committee meetings at which the draft business plans and budgets are discussed. NERC's 2009 Business Plan and Budget filing with FERC included a separate attachment that listed the major areas of stakeholder comment received on the drafts of the business plan and budget during preparation, and how those comments were considered and addressed in the business plan and budget development process. NERC intends to continue to include such an attachment in its business plan and budget filings with FERC in future years. NERC must also take into account the directives of its regulators in developing its business plans and budgets. Striking an appropriate balance of interests in its business plans and budgets is a critical challenge for NERC.

Beginning with the initial 2007 business plan and budget developed by NERC as the ERO for submission to FERC, the quality of explanations for increases in staffing and other resources, proposed new initiatives and resulting increases in requested statutory funding and assessments have evolved and improved through successive business plans and budgets. NERC's 2010 Business Plan and Budget will continue to reflect this evolution and improvement in the presentation of the explanations and support for increases (and decreases) in its staffing and other resource requirements.

#### Specific NERC Actions

- a. NERC will continue to strive to improve its business plan and budget development processes and presentations.
2. *Provide executive-level summary graphs and tables in future business plans and budgets.*

Stakeholders commented that the NERC business plans and budgets should provide summary information including graphs, in addition to all the details, for the benefit of regulators and senior executives.

Discussion of Comments

The introduction to NERC's business plan and budget provides summary information regarding full-time equivalents, statutory expenses, and ERO funding assessments. In addition, the introduction provides a summary comparison of assessment and expense projections to budget along with an explanation of the variances and a comparison of current budget to future budgets. Lastly, a comparison of changes that occurred in the various drafts of the budget is provided.

Specific NERC Actions

- a. In the 2010 Business Plan and Budget, NERC will review the content of the introduction and consider providing additional graphs and tables to summarize information contained in the body of the document.

**3. *Develop multi-year business plans for NERC.***

Stakeholders suggested that NERC develop multi-year (three or five year) business plans so entities can gain insight into future programs, costs, and resource changes in future years.

Discussion of Comments

In its 2009 Business Plan and Budget, NERC included a projection of its budget and funding requirements for 2010 and 2011. These projections were not approved by the NERC board, but were included to provide FERC and stakeholders a view of the future direction of NERC's resource requirements. Additionally, NERC does develop five-year strategic plans every two to three years to provide long-term strategic direction to the organization. However, predicting with any degree of accuracy the future programs, costs, and resource changes beyond one year is extremely difficult as NERC matures in its role as the ERO. Since NERC already provides budget projections and periodic five-year strategic plans, the additional projected information that might be available to NERC, FERC, and stakeholders in a three to five year business plan would not appear to justify the overhead resources NERC would need to devote to developing such long-term business plans.

Specific NERC Actions

- a. Consider including in future business plans and budgets discussions of possible future programs, or anticipated expansions of or increases in resources needed by existing programs, and their cost and resource requirements.

**4. *Responding to FERC on business plan and budget submittals.***

Stakeholders commented that NERC should stand behind its business plan and budget submissions when questioned by FERC and rely on the concept of drawing from contingency reserve or realigning resources if needed rather than special assessments.

Discussion of Comments

NERC believes it has in fact stood behind its board-approved business plan and budget submissions when questioned by FERC, and utilized the concept of drawing from cash reserves or realigning resources. For example, when FERC's order on NERC's 2009 Business Plan and Budget filing questioned the adequacy of NERC's budgeted staffing and resources in reliability standards and compliance, questioned NERC's elimination of the readiness evaluation program, and required NERC to make a compliance filing addressing these issues, NERC's compliance filing (i) identified a small increase in staffing and resources for reliability standards, to be funded out of reserves, not through an additional assessment, (ii) identified an increase in staffing and resources for compliance, to be funded out of reserves, not through an additional assessment, and (iii) adhered to and defended NERC's decision to eliminate the readiness evaluation program. In addition, NERC has frequently shifted staffing and other resources among programs during the year as developments indicated that greater staffing and resources were needed in some programs than budgeted, while fewer resources were needed in other programs than budgeted. Further, to date, NERC has not needed to request FERC approval for supplemental funding (as permitted by FERC's ERO regulations) between its annual business plan and budget filings.

NERC does note, however, that the long lead time necessary between the start of annual business plan and budget preparation and the required August filing date with FERC, and the additional time to the start of the budget year (January 1), can result in budgeted staffing and resources requirements and underlying assumptions already being obsolete or in need of revision by the start of the budget year.

Specific NERC Actions

None.

**5. Allocation of budget costs.**

Stakeholders commented that NERC should consider a cost allocation based on net generation, net energy for load (NEL), and transmission kV-miles; under this approach generators and transmission-only entities would help pay for NERC as well as load-serving entities. Canadian entities expressed concern about paying for programs that are driven exclusively by FERC.

Discussion of Comments

Reliability of the bulk power system is in the best interest of the public. Section 215(c)(2)(B) of the FPA recognized that by requiring the rules of the ERO "allocate equitably reasonable dues, fees, and other charges among end users for all activities under this section." The Principles Governing an International ERO agreed to by United States and Canadian governmental authorities called for the costs of the ERO to be allocated generally on a net energy for load basis. That is the approach reflected in NERC's rules and annual budgets, with appropriate adjustments for programs that benefit only particular areas (for example, the costs of the Interchange Distribution Calculator used for the Eastern Interconnection are allocated only to the



Eastern Interconnection.) The value of the general NEL basis for allocating costs is that it allocates the costs among all end-users, ensures that no one pays twice, and is relatively simple to administer. NERC and NPCC have negotiated Memoranda of Understanding with the appropriate authorities in Ontario and Québec and are working on similar MOUs for other Canadian provinces regarding the allocation of certain compliance program costs to Canadian provinces and entities on bases other than NEL, in recognition of the differing levels of NERC's and NPCC's compliance monitoring and enforcement activities in these Provinces.

Specific NERC Actions

- a. In conjunction with future annual business plans and budgets, review the rationale for continued use of NEL as the sole basis for allocating costs.
- b. Consider in developing the basis for cost allocation to Canadian entities those costs associated with FERC-specific requirements.

**6. *Request NEL information directly from load-serving entities.***

Stakeholders suggested that NERC should directly question all load-serving entities for load information, rather than obtaining it from balancing authorities, which do not have good information.

Discussion of Comments

If improved or more accurate NEL data would be available if it was collected by NERC directly from load-serving entities, and it could be collected in a cost-effective manner without placing increased burden on NERC staff and resources, NERC would consider a modification to the collection methodology.

Specific NERC Actions

- a. Review with Regional Entities the mechanism for collecting NEL data and evaluate if there is any advantage in terms of accuracy, efficiency, or cost-effectiveness to having NERC collect these data directly from load-serving entities, rather than the Regional Entities collecting the data.

**7. *Amend the budget templates.***

One Regional Entity suggested NERC amend the budget templates used to:

- Compare prior year budget to the proposed budget rather than to “projected actual prior year”;
- Use percentages for the comparison rather than dollars, since FERC has used percentages of increase to inquire about questionable items;
- Require explanations be submitted with the budgets for any increase or decrease of 15 percent on any line item [rather than 10 percent];

- Ensure that information be thoroughly discussed amongst the Regional Entity Budget Group (REBG) for relevance and necessity; and
- Correct common titles, names of functions, etc. before the templates are reissued.

Discussion of Comments

2010 budget templates have already been modified to address the first and last of the comments above. Item four has been an ongoing endeavor at NERC since 2008. With respect to items two and three, NERC believes that in the context of budget to budget and budget to actual variance analysis actual dollars is a more appropriate and a typical measure rather than percentages.

Specific NERC Actions

None.

**8. *Apply standard language for reliability standards development and compliance in NERC and Regional Entity business plans and budgets.***

One Regional Entity suggested that standard language with regard to reliability standards development and compliance and enforcement be applied to all of the NERC and Regional Entity future business plans and budgets. Exception or expansion text could be included where specificity is called for. This approach would make reviews more seamless to the stakeholders and boards as well as for FERC and Canadian governmental and/or regulatory authority review. Another Regional Entity suggested that Regional Entities and NERC collaborate on a review of the NERC and Regional processes across various functions, including the interfaces between NERC and the Regions during the startup phase of the business planning cycle. This process review would allow identification of any areas of duplication or inefficiencies, and provide an opportunity for incremental improvements to be made each year.

Discussion of Comments

NERC and the Regional managers met in 2009 on a number of occasions in person and by conference call to discuss goals, objectives, and assumptions for the 2010 business plan and budget. The results of these meetings have been compiled in a document that will be used in the 2010 planning cycle.

Specific NERC Actions

- a. Utilize the common goals, objectives, and assumptions in the 2010 planning cycle.

**9. *Change the timing of the budget process.***

One Regional Entity suggested an improvement for which all Regions have offered past support is changing the timing of the budgeting process. While regulatory requirements dictate the current budget milestones, the process could be modified to allow business plan and budget changes within October. These changes could be approved by all governing bodies through an

accelerated approval process. This would give each Regional Entity an opportunity to true up its business plan and budget to reflect any known changes.

#### Discussion of Comments

The current budget process requires that Regional Entity budgets be produced by early July, to support the required filing date with FERC of August 24. NERC agrees that producing budgets for the following year without having the benefit of current year actual results is difficult. NERC would, however, be concerned about modifying the current process to permit changes to budgets in October. Not only would this change require amendment to FERC and possibly other ERO governmental authorities' regulations, but it is unrealistic to assume that all concerned governing bodies could act on an accelerated basis to approve modifications in a timely manner so that the approved assessments could be reflected in invoices that must be distributed to load serving entities by year end. Finally, FERC regulations do provide for the opportunity for NERC or a Regional Entity to file a supplemental budget request, if necessary, subsequent to FERC approval of the annual budgets.

#### Specific NERC Actions

None.

#### **10. *NERC and the Regional Entities should update annually their rolling three-year goals.***

One Regional Entity commented that NERC set a good example by developing a three-year plan leading into its 2009 business planning cycle, and encourages NERC and other Regions to continue taking this same approach, updating the rolling three-year goals each year. A rolling three-year planning horizon would enable the ERO and Regional Entities to more effectively manage organizational change and control costs.

#### Discussion of Comments

NERC agrees that this would be a useful process. However, for the reasons discussed above under issue #3, this would be a more top-level three-year plan, not a detailed three-year budget.

#### Specific NERC actions

- a. Discuss the proposal with the REBG to identify whether it is generally supported and what steps would be required to implement it.

#### **11. *Share best practices and tools.***

One Regional Entity commented that there is an opportunity for the Regions and NERC to share best practices, and perhaps to share tools, to achieve a high level of consistency and quality in the tracking and reporting of costs. There may in fact be an opportunity to reduce the cost by using common budgeting and cost accounting tools.

Discussion of Comments

NERC agrees with this comment.

Specific NERC Actions

- a. Discuss proposal with the REBG to identify overall level of acceptance and possible implementation steps.

**12. Consider a “shared reserve” among Regional Entities and NERC.**

One Regional Entity commented that one of the major uncertainties in business planning is the amount of resources needed for certain activities that can be more “lumpy” in the assignment of personnel resources and budget. The two clearest examples in the Regional Entity budgeting process are the number and cost of hearings and large event analyses. On one end of the spectrum there could be no hearings and no large event to address in a year. However, each Regional Entity must plan some reserve for such occasions. The approach used by most Regional Entities has been to assume a very small number of hearings and large event analyses and a modest cost for each. There is some risk that these assumptions could be exceeded and the individual Regional Entity would be at risk of quickly burning through its reserve required for operations. One way to address this issue is a “shared reserve” among the Regional Entities, and perhaps NERC. Each entity would contribute a requisite amount to the common reserve and be entitled to use the reserve under certain conditions. Anyone using the reserve would be required to repay the reserve in the next business cycle. Such an approach would provide greater financial strength to all of the participants and provide a tool for managing risk and uncertainty regarding unexpected peaks in workload or legal expenses. As envisioned, each entity would retain operating reserves for normal business but participate in the reserve sharing for certain high-risk and high-cost activities. This approach would allow an appropriate coverage for budget uncertainties but at a much lower total cost through sharing of the risk.

Discussion of Comments

NERC agrees that a reserve or fund available to the Regional Entities and NERC to handle the costs of hearings and event analyses has merit. NERC disagrees with the specific approach suggested above because it would create major accounting issues for the Regional Entities and for NERC. If all Regional Entities and NERC agreed unanimously with the basic concept, then NERC should raise the fund by increasing assessments to load serving entities. NERC would then “lend” funds to a Regional Entity involved in a hearing and/or event analysis to cover expenses in excess of that Regional Entity’s cash reserve. The Regional Entity would then recover the funds in the following year through increased assessments and repay NERC.

Specific NERC Actions

- a. Continue discussion with Regional Entities concerning this concept as future budgets are developed.

**13. Standardize language and expectations on components of indirect costs.**

Several Regional Entities commented that NERC and the Regional Entities need to standardize language and expectations regarding the acceptable components of indirect costs so the Regional Entities can consistently budget certain expenses as either indirect (overhead) or direct (functional.) With two full years of experience, and in accordance with FERC guidance, NERC and the Regional Entities should be able to implement a uniform expense allocation that will enhance consistency among the Regional Entities and NERC.

One area of particular concern to one Regional Entity is the labeling of committee/forum activities as indirect. In that Region, stakeholder experts participating in committee activities are direct contributors to reliability improvements in the Region, yet allocating that expense to several functional areas as defined in the NERC budget template is not practical or efficient.

Discussion of Comments

In its Order on the 2009 NERC and Regional Entity Business Plans and Budgets, FERC directed NERC and the Regional Entities to include in the 2010 Business Plan and Budget filing a definition of what is to be included in “indirect costs”, to be applied consistently by NERC and each Regional Entity.<sup>7</sup> NERC and the Regional Entities are working on development of a common definition of, and procedures for budgeting and recording, indirect costs for purposes of the 2010 Business Plans and Budgets, as directed by the Commission.

Specific NERC Actions

- a. In conjunction with the Regional Entities, complete development of a common definition of, and procedures for recording and budgeting, indirect costs.
- b. Consider revisions to the delegation agreements to address this issue as appropriate.

**14. Implement a uniform budgeting tool.**

Two Regional Entities suggested NERC consider implementing a uniform budgeting tool, in place of the NERC-supplied Excel spreadsheet templates, to capture and project expected budgetary needs for each Region. Due to the complexity of budgeting to the function level for so many entities, it would be useful if a common tool could be used by NERC and all Regional Entities. This could help improve efficiency and consistency by allowing each organization to prepare its budgets in a more automated fashion.

Discussion of Comments

NERC is of the opinion that this would be a useful undertaking assuming that it was cost effective for all involved entities to convert to using the common budgeting tool.

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<sup>7</sup> Order Conditionally Accepting 2009 Business Plan and Budget of the North American Electric Reliability Corporation and Ordering Compliance Filings, 125 FERC ¶ 61,056 (2009), at P 51.

Specific NERC Actions

- a. Discuss concept with the REBG to evaluate if there is consensus to pursue development of such a tool.

**15. *Adopt uniform budget metrics.***

Two Regional Entities commented the adoption of uniform metrics would enable the identification of trends that would be useful for projecting future resource needs. NERC and the Regional Entities have already started making efforts toward this goal.

Discussion of Comments

As stated above, NERC and the Regional Entities are already engaging in efforts toward this goal.

Specific NERC Actions

- a. Continue efforts in the 2010 budget cycle.

**16. *NERC and Regional Entities should use generally accepted accounting principles.***

Two Regional Entities suggested that NERC and the Regional Entities use generally accepted accounting principles to increase the level of consistency in the business plans and budgets. This would require NERC and each Regional Entity to prepare an operating budget and a separate capital expenditures budget.

Discussion of Comments

The development and tracking of separate operating and capital expenditures budgets has already been adopted for development of the 2010 budget and in reporting of 2009 actual results.

Specific NERC Actions

- a. Continue implementation in the 2010 and future year budgets and in the 2009 and future year reporting of actual costs

## **K. Stakeholder Communications and Public Relations**

### ***1. NERC Website functionality and ease of use.***

Stakeholder comments highlighted navigation, information architecture, search functionality, and data presentation as areas in need of improvement for [www.nerc.com](http://www.nerc.com). Specific comments pertaining to the reliability standards page included: both board- and FERC-approved dates for reliability standards should be shown; and instructions for balloting reliability standards should be easier to find.

#### Discussion of Comments

NERC's Website underwent a complete re-design in July 2007. While the new site represents a significant improvement over the previous site, work is still needed to improve the user experience, increase functionality, and meet the needs of the growing organization. A large part of NERC's activities depend upon its Website to share information, facilitate discussions, and manage processes. As such, it is essential that appropriate priority be given to this tool.

#### Specific NERC Actions

- a. NERC will continue to conduct regular surveys of the users of the NERC Website and develop tools to track and measure usability of its Website based on the survey results. The most recent survey has been completed.
- b. NERC will implement improvements to the Website based on these results.
- c. Add a standard "Approvals" box in the footer of each standard to indicate NERC board and FERC approval dates along with a link to the table of "Effective Dates for Mandatory Standards."
- d. Display more prominently and obviously on the NERC Website the listing of "Effective Dates for Mandatory Standards" and change the title to "List of FERC-Approved Standards and Effective Dates."
- e. Provide better access to frequently used information, including where to find information about balloting.

### ***2. Outreach to non-traditional and smaller entities.***

Stakeholders indicated that information disseminated by NERC (newsletters, etc.) is geared toward traditional vertically-integrated utilities and not towards LSEs, PSEs, DPs, etc. NERC should pursue a better outreach program for non-traditional and smaller entities.

#### Discussion of Comments

The audiences for NERC information span a broad spectrum of entities, each of which has different interests. Feedback on NERC issuances is always invited, encouraged and welcomed.

Specific NERC Actions

- a. NERC will seek input from industry associations on improving outreach to non-traditional and smaller entities.
- b. NERC will work to implement specific suggestions received as a result of these discussions.



**FEDERAL ENERGY REGULATORY COMMISSION  
DOCKET NO. RR09-\_\_\_**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

**ATTACHMENT 3**

**TO**

**THREE-YEAR  
ELECTRIC RELIABILITY ORGANIZATION  
PERFORMANCE ASSESSMENT REPORT**

**NERC EVALUATION OF REGIONAL ENTITIES**

**July 20, 2009**

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## I. INTRODUCTION

Prior to the formation of the ERO, NERC (then the North American Electric Reliability Council) operated as a voluntary organization with its only members being the Regional Reliability Councils. The Regional Reliability Councils consisted of industry participants in the Region participating on a voluntary basis. The NERC Board of Trustees comprised representatives of the Regional Reliability Councils, who were executives and managers of electric utilities and other electric industry participants in the Region. Funding was voluntary from the members of the Regions to fund both Regional and NERC operations. This mode of operation existed essentially since the formation of NERC in 1968 and even earlier, since some Regional councils pre-dated the formation of NERC. In that model, NERC served its members in many functions and the Regional councils had a great deal of say in the day-to-day operation of NERC; the operation of the Regional Reliability Councils was directed by their members.

In anticipation of becoming the ERO, NERC moved to an independent Board of Trustees in 2001. With the certification of NERC as the ERO, the previous relationship with the Regional Reliability Councils changed significantly. The Regional Reliability Councils, which became Regional Entities, remained members of NERC, but they were joined by hundreds of other NERC members in 10 different stakeholder sectors. Under NERC's Rules of Procedure, funding for both NERC and most Regional activities comes through NERC. And within the United States, the role of the Regional Entities became one of carrying out authorities delegated by NERC through a delegation agreement approved by the Federal Energy Regulatory Commission (the Commission). Three of the Regional Entities (NPCC, MRO, and WECC) also have responsibilities in Canada, as the bulk power system spans the international border. A portion of Baja California Norte, Mexico, is also within the Western Interconnection.

Section 215 contemplates delegation of compliance and enforcement to Regional Entities. As the ERO, NERC has delegated certain authorities to eight Regional Entities. These authorities include: (i) Regional standards development; (ii) compliance monitoring and enforcement, including registration of organizations; and (iii) other services in support of NERC's statutory reliability functions including reliability assessments, event analysis, and training and education activities. The implementation of the ERO's statutory responsibilities through the delegation agreements has generally been successful. The Regional Entities' greatest efforts to date have been in the organization registration and CMEPs. The current term of the delegation agreements runs through May 2010.

This Attachment is divided into evaluations of the performance of the Regional Entities regarding Regional standards development (§II); compliance monitoring and enforcement including organization registration (§III); reliability assessments (§IV); and the other delegated functions (§V). Additionally, §VI responds to two specific directives from the Commission's April 19, 2007 Order in which it originally approved the delegation agreements between NERC and the Regional Entities.<sup>1</sup> The Attachment encompasses descriptive and statistical data on the

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<sup>1</sup> *Order Accepting ERO Compliance Filing, Accepting ERO/Regional Entity Delegation Agreements, and Accepting Regional Entity 2007 Business Plans*, 119 FERC ¶ 61,060 (2007) (*Delegation Agreements Order*).

Regional Entities' organization and performance; comments received from stakeholders in NERC's stakeholder survey; and NERC's evaluation of the Regional Entities' performance and areas for improvement.

All the Regional Entities meet the governance requirements under Section 215, but each Regional Entity meets those requirements in a different manner. Some of the Regional Entities also perform functions in addition to those delegated to them by NERC (non-statutory functions.) The following table summarizes important characteristics of the Regional Entities.

**Table 1 - Comparison of NERC Regional Entities — 2009**

(Regions marked with an asterisk (\*) are cross-border in nature, i.e., their responsibilities extend to jurisdictions in Canada and/or Mexico in addition to the United States.)

Region	Board Makeup	Non Delegated Activities	Registered Entities	Registered Functions	2009 Budget Statutory FTE	2009 Budget Non Statutory FTEs	2009 Budget Compliance FTEs	2009 Statutory Budget	2009 Non-Statutory Budget
FRCC	Stakeholder	Registered as a Reliability Coordinator and Planning Authority; other member services	70	240	18.34	9.15	9.26	\$3,977,868	\$3,361,112
MRO*	Stakeholder	None	117	433	26.5	0	10	\$6,405,724	\$0
NPCC*	Hybrid (Independent Chair)	Criteria Development	268	544	27.2	2.8	9	\$10,008,885	\$1,012,790
Reliability First	Hybrid (3 of 14 Members are Independent Members)	None	357	674	44	0	23	\$11,434,201	0
SERC	Stakeholder	None	226	636	43	0	21.5	\$10,095,546	0
SPP	3 Independent Trustees — Part of SPP Inc. which is a Registered Entity	SPP Inc. is a Reliability Coordinator, Transmission Service Provider, Interconnection Authority, Reserve Sharing Group, Planning Authority, and Transmission Planner.	115	378	17.2#	0	6#	\$7,123,827	0

Region	Board Makeup	Non Delegated Activities	Registered Entities	Registered Functions	2009 Budget Statutory FTE	2009 Budget Non Statutory FTEs	2009 Budget Compliance FTEs	2009 Statutory Budget	2009 Non-Statutory Budget
Texas RE	Hybrid — 16 members which include five independent members TRE is a Division of ERCOT Inc.	Texas RE investigates, audits, and reports on compliance with the ERCOT Region reliability-based Protocols and Operating Guides (Protocols) for the Public Utility Commission of Texas (PUCT).	218	340	26.95	5.05	14.15	\$6,167,024	\$871,997
WECC*	Hybrid — 32 member Board, 7 of which are non-affiliated. Four are from state government or regulatory bodies. Four are from the 2 Canadian provinces, one is from the CFE in Mexico, and 4 represent end users. The	WECC serves as the Reliability Coordinator and Interchange Authority for the Western Interconnect and operates the Western Renewable Energy Generation Information System	467	1250	140 (54 for RC)	4	30	\$38,691,767 of which \$21,201,021 is to fund the WECC Reliability Coordinator	\$798,197

Region	Board Makeup	Non Delegated Activities	Registered Entities	Registered Functions	2009 Budget Statutory FTE	2009 Budget Non Statutory FTEs	2009 Budget Compliance FTEs	2009 Statutory Budget	2009 Non-Statutory Budget
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balance is comprised of 12 entities either owning or operating transmission or involved in the electric industry in the Western Interconnection.

# SPP RE staffing numbers do not include 2.0 FTE contractors in Compliance.

## **II. DEVELOPMENT OF REGIONAL RELIABILITY STANDARDS**

As of May 31, 2009, there has been limited activity by Regional Entities in Regional standards development. Only one Regional Entity, WECC, has completed the development, and obtained NERC and FERC approvals, of any Regional reliability standards. WECC has developed several Regional reliability standards that are either more stringent than, or focus on areas not addressed in, the corresponding NERC continent-wide reliability standards. These standards are included on the NERC Website with all the continent-wide standards that have been approved by the NERC board. FRCC, MRO, ReliabilityFirst, SERC, SPP RE and Texas RE all have Regional standards at various stages of development, but none of these Regional standards projects has advanced to the point of obtaining NERC and FERC approval.

### **A. Issues Identified by Stakeholders**

Because there has been relatively little activity to develop Regional reliability standards, there were few comments provided by stakeholders regarding Regional performance related to standards development. The issues identified are overarching in nature and include those discussed in the following subsections.

#### **Issue: Regional Guidelines, Criteria, and Supplements**

Regional guidelines, criteria, and supplements and their status within the Region regarding monitoring and enforcement were identified as an issue by some industry stakeholders. Some stakeholders are not clear if these documents are informational in nature or have some level of materiality in the context of the NERC Reliability Standards. Some of the confusion stems from work not being completed on the “fill-in-the-blank” standards that FERC identified in Order No. 693. Regional Entities will need to determine and communicate the status of these various documents in their respective Regions. For these guides, criteria, and supplements to be mandatory and enforceable under the Federal Power Act, they will need to be developed into Regional reliability standards, including approval by NERC and then by the Commission. In addition, NERC and the Regional Entities will need to place a higher priority on completing work on the fill-in-the-blank standards.

#### **Issue: Developing Regional Reliability Standards and Timing with NERC Standards**

Some stakeholders stated their belief that Regional Entities should refrain from developing Regional reliability standards until NERC has finished its development of a standard on the subject matter. Such an approach allows for the North American standard to be completed and the stakeholders in the Region to assess the need for a Regional reliability standard that would either be more stringent than, or focus on a subject not covered by, the NERC Reliability Standard. This issue falls in the broader category of prioritization of standards development activity and should be addressed jointly by NERC and the Regional Entities.



### **Issue: Fill-in-the-Blank Reliability Standards**

When FERC approved NERC's Version 0 Reliability Standards in May 2007, it withheld approval of several fill-in-the-blank standards pending completion of these standards by NERC and the Regional Entities. These standards require Regional Entities to develop specific requirements in order to implement the NERC Reliability Standard within each Region. For example, NERC standards require the implementation of an underfrequency load shedding program. However, the standard requires the Region to define the specific details of the load shedding requirements within the Region. Neither the NERC work on the fill-in-the-blank standards nor the Regional work has been completed. Several stakeholders commented on the need to complete this effort in order to eliminate the potential gap in reliability and provide certainty to the registered entities on the application of these standards. Currently, 15 of 24 fill-in-the-blank standards are actively being addressed by NERC Standard Drafting Teams with completion anticipated in early 2010. The remaining nine are included in projects slated to commence in 2010. This issue falls in the broader category of prioritization of standards development activity and should be addressed jointly by NERC and the Regional Entities.

### **Issue: Open and Inclusive Standards Development Processes**

For the Regional Entities that have undertaken Regional standards development activities, stakeholders commented on the openness of the process and the ability of smaller entities to participate effectively in the standards development process. Smaller entities stated that, due to limited staffing and resources, they often have difficulty providing staff to participate on drafting teams and committees. This issue is not limited to Regional standards development programs, but also applies to the NERC standards development process. There are no easy solutions. Use of representatives from trade associations and other support groups can help provide a means through which the input of smaller entities can be brought to the standards development process. NERC continually monitors the participation by smaller entities in standards development activities.

### **B. NERC Views of Regional Entity Performance Regarding Regional Standards Development**

Since certification as the ERO, NERC has exercised its Rules of Procedure regarding Regional Entity standards development processes with WECC, MRO, and ReliabilityFirst. Therefore, the observations that follow are limited to these engagements. In this timeframe, WECC has submitted 16 Regional standards, MRO has submitted four Regional standards, and ReliabilityFirst has submitted two Regional standards for NERC approval. Although the experience to-date is limited, it is possible to draw on that experience and describe points of emphasis for Regional standards development processes from this point forward. As with much of the programs that NERC and the Regional Entities have implemented under Section 215, the start-up phases took a huge effort and it is not yet over. Over time, practices and procedures have improved, and they will continue to do so.

- **Concise Statement of Basis and Purpose.** Regional Entities should include with their request for NERC to approve a Regional standard a concise statement of the basis and

purpose of the Regional standard. This statement will facilitate both NERC review and the filing with FERC and other applicable governmental authorities.

- **Criteria for Regional Reliability Standards.** The criteria for having a Regional reliability standard are that the Regional standard is either more stringent than the NERC continent-wide standard (which includes the situation where a Regional standard addresses an issue that a NERC standard does not) or the Regional standard is necessitated by physical differences in the system.<sup>2</sup> Because NERC, and later FERC, will evaluate the Regional standard using those criteria, it is important for Regional Entities to include a clear description and discussion of how the Regional standard meets those criteria at the time the Regional Entity requests NERC approval of the Regional standard.
- **Quality Assurance.** Regional Entities should focus attention to the quality of the standards produced through their standards development processes, ensuring the requirements are enforceable, address a single main idea, are concise and clear on expectations, and that compliance-related elements are also focused similarly.
- **Developmental Record.** Regional Entities should compile, and make readily available to NERC, the complete developmental record of the Regional standard.
- **Consistency of Glossary Terms.** The Regional Entities need to be mindful that proposed glossary terms do not conflict with terms already existing in the NERC *Glossary of Terms Used in Reliability Standards* or with those developed by other Regional Entities.
- **Violation Risk Factors (VRF) and Violation Severity Levels (VSL).** Regional reliability standards become enforceable as Reliability Standards under Section 215 of the Federal Power Act in the U.S. once they are approved by FERC. Therefore, Regional reliability standards must meet the requirements set out by FERC for approval of such standards. That includes having VRFs and VSLs that meet the criteria FERC has set out in its various orders. Regional Entities should ensure that VRFs and VSLs meeting those criteria are included in the Regional standards filing materials at the time the Regional Entity asks NERC to approve the standards.
- **Communications.** Regional Entities should strive to improve communications with stakeholders about standards development activities. This is especially important given the number of smaller entities that may have an interest in a standards development activity, but lack the resources to actively participate in standards development activities in multiple Regions. WECC has made recent improvements to its Website in this regard.
- **Comment Processes.** The comment process could be improved by requesting stakeholders to comment on specific areas of focus in the proposed standards instead of just offering a generalized opportunity to express comments on the standard in its entirety and as a whole. Further, because of the number of entities that participate in multiple

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<sup>2</sup> NERC Rules of Procedure §312.1.

Regions, the Regional Entities should develop and use a common system and commenting forms for all standards development activity. It is also useful for Regional Entities to include, in the record of standard development, summary information that indicates how many total comments were received and the break-down by segment or sector and to monitor participation trends and engagement by smaller entities.

**Regional Reliability Standards Working Group.** A Regional Reliability Standards Working Group (RRSWG) has been formed consisting of NERC staff and Regional Entity standards staff. Among its accomplishments the group:

- provided input to the original version of the NERC standards development plan
- developed the NERC Evaluation Procedure (the procedure that outlines the specific approval steps in the evaluation of a Regional reliability standard)
- cross checks Regional standards under development for consistency across Regions, and
- monitors and discusses continent-wide standards issues that potentially impact the Regional Entities' standards development processes such as the modification of the variance language in the NERC Rules of Procedure.

The RRSWG continues to add valuable input into the standards development process.

### **III. COMPLIANCE MONITORING AND ENFORCEMENT PROGRAM**

#### **A. Overview**

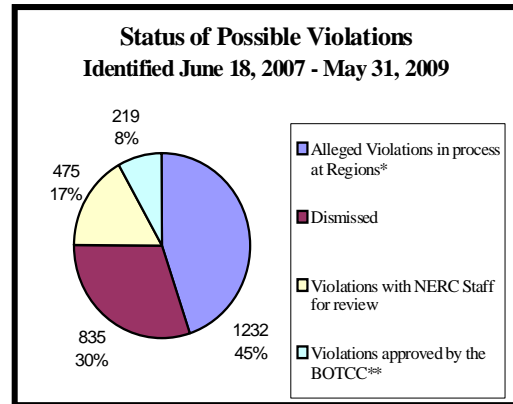
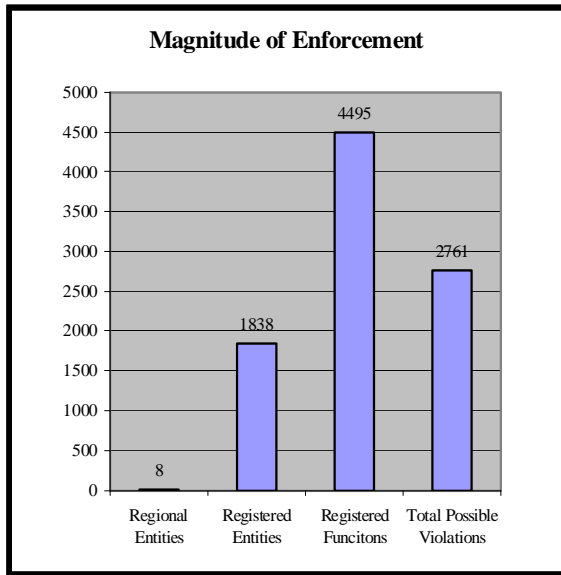
The transition from voluntary to mandatory standards has been a step change in how the electricity industry deals with adherence to reliability standards. The Regional Entities have spent the large majority of their efforts in the past three years in implementing the uniform Compliance Monitoring and Enforcement Program (CMEP). While a number of improvements can and should be made, overall, the Regional Entities' implementation of the program has been generally successful, especially given the significant increase in the number of entities subject to mandatory standards and the volume of activities associated with compliance and enforcement. Regional Entities have identified over 1,800 registered entities that are responsible for one or more reliability functions as compared to approximately 300 in the voluntary regime. The clarity in accountability that comes from registering particular entities for particular functions marks a significant step forward in improving the reliability of the bulk power system. The Regional Entities have established compliance monitoring programs that include all the methods of monitoring for compliance specified in the NERC uniform CMEP. The Regional Entities conduct Regional workshops, with NERC participation, to support the registered entities' understanding of compliance requirements. The discovery of alleged violations and mitigation of violations have been successful.

Prior to June 18, 2007, NERC allowed registered entities to self-report violations and provide mitigation plans. In return, if the mitigation plan was completed on schedule NERC

would not find the entity in violation of the reliability standard (for the same noncompliance) when it became mandatory and enforceable. During the pre-June 18, 2007 period, registered entities reported over 5,100 separate violations of reliability standards. Of these, over 1,800 were determined by the Regional Entities not to be violations. Registered entities completed mitigation of the remaining 3,300 violations generally before the end of 2007. This unexpected volume of self-reported reliability standards violations created a very large amount of work for the Regional Entities prior to and after the reliability standards became mandatory, just at the time the Regional Entities were starting up their Regional CMEPs. The Regional Entities and NERC successfully processed these self-reported violations and associated mitigation plans. Each report of a violation, and the associated mitigation plan, in the United States was provided to the Commission. The Regional Entities and NERC cataloged, processed, and tracked each violation and its associated mitigation plan to completion, and only 48 of these pre-June 18, 2007 mitigation plans are still open.

Since reliability standards became mandatory and enforceable NERC has received from the Regional Entities reports of 2,761 allegations of violations of approved reliability standards. Each of these allegations of violations that occurred in the United States has been reported to the Commission. Many of these possible violations have been dismissed after investigation, resulting in a total of 1,926 alleged violations to be processed. Registered entities have developed and submitted to the Regional Entities mitigation plans covering 1,714 of these alleged violations; of these, the mitigation plans for 1,367 alleged violations have been accepted by the Regional Entity and approved by NERC. The effort to collect, catalog, and process each of these alleged violations and mitigation plans cannot be overlooked; the Regional programs have been successful in accomplishing these important tasks.

However, the effort is not complete. Of the 1,926 alleged violations that have been identified by the Regional Entities, only 475 violations have been provided as a Notice of Confirmed Violation (NOCV) or Settlement to NERC staff for review and Board of Trustees Compliance Committee (BOTCC) approval. Of the 475, 219 have been approved by the BOTCC. The data in the following charts is as of May 31, 2009:



\*States 1 & 2 Plus Settlement Agreements at Regions.

\*\*Violations with NERC Staff for review and Violations approved by BOTCC relates to States 3 & 4 of the Compliance Violations Statistics Report, but provides a different split than the buckets provided in the report.

A number of improvements should be made. The Regional Entities efforts for violation identification have been commendable, but improvement is needed in the speed of processing alleged violations and the companion mitigation plans through to completion. Only 25 percent of the alleged violations identified by the Regional Entities have been submitted to NERC staff for review, resulting in a backlog of 75 percent of alleged violations remaining at the Regional Entities. The backlog issue is discussed in more detail below and in **Attachment 2**. There will always be some backlog due to the need to provide registered entities due process.

The NERC *Sanction Guidelines* allow for some discretion in establishing penalty amounts and recognize a monetary penalty must be assessed and structured in such a way that an owner, operator, or user of the bulk power system does not consider its imposition as simply an economic choice or a cost of doing business. The *Sanction Guidelines* provide that the penalty must have a relationship to the seriousness of the specific violation. First violations, violations for a failure to document, violations where the registered entity has had a culture of compliance, among other factual scenarios, have been assessed minor penalties, as is becoming visible as more of the filed penalties become public. However, under the *Sanction Guidelines*, situations involving repeated violations, violations that pose a serious or substantial risk to the bulk power system, and violations that are made either in a culture of noncompliance or as economic decisions to not comply, will be considered more serious, resulting in a higher penalty.<sup>3</sup>

NERC and the Regional Entities, as a whole, also have limited experience to-date with compliance violation investigations (CVIs) for the enforceable standards. NERC has communicated to those Regional Entities conducting CVIs the need for improvement in the

<sup>3</sup> NERC Sanction Guidelines, Sections 3.9 and 4

thoroughness of evidence-gathering, review of evidence, investigation depth, and application of the reliability standards in specific situations. NERC has also conducted workshops aimed at better preparing Regional Entity staff to conduct CVIs.

With enforcement actions, the Regional Entities must improve on the thoroughness and accuracy of the information provided in the NOCVs and Settlement Agreements submitted to NERC staff for review. Many of the NOCVs and Settlement Agreements submitted by the Regional Entities to-date have required additional work by the Regional Entity to meet NERC's expectations and the requirements of the Commission orders. In some cases, a Regional Entity has identified the violation as documentation related, but subsequent review by NERC determined the registered entity actually failed to perform some portion of the substantive requirements in the standard. In other cases, registered entities' certifications were found not to be supported by the submitted documentation. The Regional Entities have commented, accurately, that the level of detail and breadth of support FERC is requiring to support a notice of penalty has changed over time. NERC has provided training with respect to FERC's changing expectations and will work with the Regional Entities to continue to focus efforts on compiling and submitting documentation and other information to support notices of confirmed violations and penalties that will meet FERC's requirements.

**B. Evaluation of Individual Regional Entity Performance**

The following section provides statistical information and calculated performance metrics related to Regional Entity performance of the Compliance Monitoring and Enforcement Program (CMEP) and other compliance activities. The information is as of May 31, 2009. Because these statistics and calculated performance metrics reflect averages over a nearly two-year period, they do not adequately show trends in performance over that period.

NERC plans to add to and refine these statistics and performance metrics over time based on input from Regional Entities and other stakeholders, and to incorporate them, as appropriate, in revised delegation agreements.

Considering the short time period the mandatory compliance enforcement program has been in place, it is not surprising that there are actions the Regional Entities can take to improve their performance. As the compliance enforcement effort is still in its nascent stage, there are data points that are not known and there are no baselines for trend analysis. Comparing and contrasting the Regional Entities' performance ranges and medians provides a method by which to evaluate relative performance among the Regional Entities, taking into consideration various factors affecting each Region. NERC's observations are derived from the Regional Entities' performance data in processing alleged violations, staffing levels, and workload demands. Summarized data is provided in the tables that follow. Unless otherwise indicated, all data is as of May 31, 2009.

### Regional Entity Compliance Program Statistics and Performance Metrics

Region	Compliance FTEs	Registered Entities	Registered Functions	Number of Violations				Violation Processing Time						
				Total Possible Violations including Dismissals	Number of Canadian Violations	Dismissals	Alleged Violations excluding Dismissals	Number of Violations recommended for a non-zero penalty since June 18, 2007	Violations submitted to NERC Staff as a NOCV or Settlement for review	Number of violations submitted to NERC Staff that have been approved by the BOTCC*	Ave Time to determine if a Possible Violation is an Alleged Violation	Ave Time to report an Alleged Violation to NERC	Number of Violations that did not receive a NAVAPS for more than 100 days	Number of Violations that did not receive a NAVAPS for more than 300 days
FRCC	9.3	70	240	183	0	15	168	0	51	2	18.69	36.62	4	2
MRO	10.0	117	433	97	6	20	77	6	47	34	17.27	9.07	0	0
NPCC	9.0	268	544	72	5	9	63	12	29	13	25.7	8.69	0	0
ReliabilityFirst	23.0	357	674	142	0	17	125	7	20	9	25.02	9.44	34	1
SERC	21.5	226	636	282	0	43	239	40	122	110	10.39	7.55	21	19
SPP	8.0	115	378	78	0	1	77	1	47	8	44.7	12.55	11	0
TRE	14.2	218	340	68	0	4	64	3	33	32	18.42	2.53	18	0
WECC	30.0	467	1250	1839	2	726	1113	31	126	11	54.26	18.33	433	161
Total	124.9	1838	4495	2761	13	835	1926	100	475	219			521	183
Average	15.6										26.8	13.1		

Data as of May 31, 2009  
 \*Includes closed violations

Region	Identification			Violation Type		Performance Ratios			Staff Ratios					
	Percent of Total Possible Violations that are Dismissed	Alleged Violations per Registered Function	Percent of Violations submitted to NERC Staff that were recommended for a Non-zero Penalty since June 18, 2007	Percent of Active* Alleged Violations deriving from Failure to Perform	Percent of Active* Alleged Violations deriving from Failure to Document	Percent of Alleged Violations submitted to NERC Staff as a NOCV or Settlement for review	Percent of Violations submitted to NERC Staff for review that have been approved by the BOTCC	Percent of Alleged Violations that have been approved by the BOTCC	Registered Entities Per FTE	Registered Functions Per FTE	Possible Violations (including dismissals) Per FTE	Alleged Violations (excluding dismissals) Per FTE	Number of Violations submitted to NERC Staff as a NOCV or Settlement for review per FTE	Number of BOTCC Approved Violations per FTE
FRCC	8%	0.70	0%	55%	45%	30%	4%	1%	7.6	25.9	19.8	18.1	5.5	0.22
MRO	21%	0.18	13%	62%	38%	61%	72%	44%	11.7	43.3	9.7	7.7	4.7	3.40
NPCC	13%	0.12	41%	33%	67%	46%	45%	21%	29.8	60.4	8.0	7.0	3.2	1.44
ReliabilityFirst	12%	0.19	35%	67%	33%	16%	45%	7%	15.5	29.3	6.2	5.4	0.9	0.39
SERC	15%	0.38	33%	54%	46%	51%	90%	46%	10.5	29.6	13.1	11.1	5.7	5.12
SPP	1%	0.20	2%	72%	28%	61%	17%	10%	14.4	47.3	9.8	9.6	5.9	1.00
TRE	6%	0.19	9%	81%	19%	52%	97%	50%	15.4	24.0	4.8	4.5	2.3	2.26
WECC	39%	0.89	25%	54%	46%	11%	9%	1%	15.6	41.7	61.3	37.1	4.2	0.37
Average of individual averages	14%	0.35	20%	60%	40%	41%	47%	23%	15.05	37.69	16.58	12.58	4.05	1.77
Average based on raw data totals	30%	0.43	21%	56%	44%	25%	46%	11%	14.71	25.92	19.76	15.42	3.80	1.75

\*NERC enforceable alleged violations not completely closed

**FRCC**

<b>Alleged Violations per Registered Function</b>	<b>Registered Functions per FTE</b>	<b>Percent of Active Alleged Violations Deriving from Failure to Perform</b>	<b>Percent of Alleged Violations Submitted to NERC as a NOCV or Settlement for Review</b>	<b>Average Time to Determine if a Possible Violation is an Alleged Violation (days)</b>	<b>Percent of Alleged Violations Approved by the BOTCC</b>
<b>0.70 (2)</b>	<b>25.9 (2)</b>	<b>55% (5)</b>	<b>30% (6)</b>	<b>18.7 (4)</b>	<b>1% (7)</b>

*Note: The statistics and performance metrics shown in the table above, and in similar tables for the other Regional Entities, are followed by a number in parentheses ( ) that represents the relative ranking of that statistic or metric among the eight Regional Entities. These rankings represent only the order in which the various statistics or metrics place each Regional Entity compared to the others.*

FRCC is currently registered as the Reliability Coordinator (RC) and Planning Authority (PA) for its Region. FRCC uses Florida Power & Light as its RC agent. As a registered entity, FRCC's RC and PA functions are subject to compliance monitoring by NERC per the delegation agreement and are subject to CVIs should events occur in FRCC that warrant such investigations.

FRCC is the smallest Region in terms of registered entities (70) and registered functions (240.) As of May 31, 2009, FRCC has reported 183 possible violations of reliability standards, 15 of which were subsequently dismissed. FRCC's 168 alleged violations make it third in terms of number of alleged violations. FRCC's ratio of alleged violations per registered function (0.70) is second highest among Regions.

FRCC has confirmed 51 (30 percent) of its alleged violations and submitted them to NERC staff in the form of either a NOCV or Settlement Agreement for review. FRCC has achieved BOTCC approval of two of these, representing a 1 percent completion rate over the last two years, placing FRCC last in terms of percent of alleged violations processed through to BOTCC approval. To date, FRCC has not recommended any non-zero dollar penalties and no alleged violations have been contested.

It has taken FRCC an average of nearly 19 days to determine whether a possible violation qualifies as an alleged violation, and an average of nearly 37 days to report that alleged violation to NERC, which is twice the average time of any other Region. FRCC has had four violations that have not received a Notice of Alleged Violation and Proposed Penalty or Sanction (NAVAPS) for more than 100 days, including two that have not received a NAVAPS for more than 300 days.



Of its active<sup>4</sup> alleged violations, FRCC has identified 55 percent to be derived from failure to perform requirements of reliability standards (versus failure to document requirements). FRCC has not recommended any non-zero dollar penalties, even for violations related to a failure to perform the requirements of the standards.

FRCC has had manpower shortages that have challenged its ability to process violations and at times has led to a significant backlog. During 2007 and 2008, NERC staff provided support at the FRCC offices for several weeks to assist with various processing stages, including mitigation plan review and verification. SERC has also recently provided support to FRCC to complete certain tasks.

FRCC has increased its compliance program staffing and has 9.3 direct full-time equivalents (FTEs) dedicated to compliance and organization registration as reported in the 2009 budget and 25.9 registered functions per FTE, which is now the second lowest number of registered functions per FTE among the Regions.

FRCC used nine volunteers on its audits of registered entities in 2007 and 2008; for 2009, FRCC reports it is using only FRCC compliance staff. While FRCC can engage its compliance committee for technical matters related to compliance if desired, the Commission requires a quarterly report from FRCC regarding compliance matters presented to its compliance committee.

FRCC has not had the opportunity to conduct any CVIs to-date. NERC initiated a CVI in FRCC in 2008 since FRCC was not able to participate in the investigation of the February 2008 significant power outage in FRCC due to FRCC's registration as the RC and PA for the Region.

FRCC completed four on-site compliance audits in 2008, and has 16 audits scheduled for 2009. FRCC also held seven compliance workshops in 2008, with 140 attendees. FRCC implemented the Guidance Solutions Compliance Tracking and Submittal System, and is part of a six-Region consortium using this system.

### Overall Effectiveness

FRCC ranks third in number of possible violations and, as inferred by its low rate of dismissals, FRCC (and the registered entities that self-reported violations) have been accurate in their identifications. However, FRCC needs to improve its timeliness in: 1) reporting alleged violations to NERC, 2) issuing NAVAPS, 3) confirming violations and issuing NOCVs or entering into settlement agreements, and 4) obtaining BOTCC approval of confirmed violations. NERC will work with FRCC to help it improve performance in these areas. FRCC plans to increase its staffing by more than three FTEs for 2010, which is expected to help in this area.

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<sup>4</sup> For purposes of these evaluations, "active" alleged violations are defined as the total number of FERC enforceable alleged violations (*i.e.*, allegations of violations less dismissals), *less* alleged violations that have not been fully processed to closure, including verified completion of mitigation plans and collection of any penalty dollars.

**MRO**

<b>Alleged Violations per Registered Function</b>	<b>Registered Functions per FTE</b>	<b>Percent of Active Alleged Violations Deriving from Failure to Perform</b>	<b>Percent of Alleged Violations Submitted to NERC as a NOCV or Settlement for Review</b>	<b>Average Time to Determine if a Possible Violation is an Alleged Violation</b>	<b>Percent of Alleged Violations Approved by the BOTCC</b>
<b>0.18 (7)</b>	<b>43.3 (6)</b>	<b>62% (4)</b>	<b>61% (1)</b>	<b>17.3 (2)</b>	<b>44% (3)</b>

MRO is a cross-border Regional Entity encompassing Manitoba and Saskatchewan in Canada. MRO and NERC have an agreement in place with Manitoba Hydro making NERC standards binding and effective on Manitoba Hydro. Manitoba recently adopted legislation that will make NERC standards mandatory in that Province. NERC and MRO also have an agreement in place with Saskatchewan Power establishing the respective roles of these parties regarding reliability and monitoring compliance with reliability standards. MRO has six joint registration organizations and has encouraged this form of registration given the number of jointly-owned facilities in its Regional footprint.

MRO is the third smallest Region in terms of number of registered entities (117) and is fourth in size based on registered functions (433). MRO is fifth in terms of FTEs committed to the compliance enforcement program, as shown in its 2009 budget.

As of May 31, 2009, MRO has reported 97 possible violations (including six from Canadian entities) with 20 dismissals. MRO's ratio of alleged violations per registered function (0.18) is second lowest among the Regions. There has been a high level of self-reporting within MRO.

MRO has confirmed 47 (61 percent) of its alleged violations and submitted them to NERC staff in the form of either an NOCV or Settlement Agreement for review. MRO has achieved BOTCC approval of 34 of these submittals, placing MRO as the third highest in percentage of alleged violations approved by the BOTCC (44 percent). To date, MRO has recommended non-zero dollar penalties for six violations, which represents 13 percent of the violations submitted to NERC staff for review, and none of its notices of alleged violations have been contested. (One registered entity initially contested two violations and subsequently accepted the alleged violations and proposed penalty without a hearing convened; therefore, the challenge was withdrawn by the registered entity.)

MRO has taken, on average, about 17 days from the time it identifies a possible violation to determine if an alleged violation exists and, on average, nine days to report that alleged violation to NERC. Both of these metrics are relatively good, placing MRO second and fourth in these categories, respectively. MRO has issued NAVAPS for all its alleged violations in less than 100 days.

Of the active violations in MRO, 62 percent were derived from failure to perform requirements of reliability standards, and 38 percent from a failure to document.

MRO has the third highest ratio of registered functions per FTE among the Regions.

MRO has not had the opportunity to lead any CVIs to date, so there is no basis for evaluating its performance in this area. (The investigation of the September 18, 2007 event was transferred to NERC as the event involved entities operating in multiple Regional Entities.) MRO has conducted six incident reviews (inquiries), which are informal investigations. No incident inquiries have resulted in a CVI; one incident inquiry resulted in an alleged violation.

MRO conducted 14 audits in 2008 and has two scheduled in 2009. MRO also conducted one compliance workshop in 2008, which was attended by more than 80 percent of its registered entities.

MRO is not affiliated with any bulk power system owners, operators, or users. MRO has adopted and implemented the uniform CMEP as approved by the Commission, which provides for fair and impartial procedures for enforcing reliability standards. Additionally, MRO adopted other procedures to address potential conflicts, including a prohibition on stakeholders and registered entities participating in compliance and enforcement decisions of MRO or related activities including the conduct of discovery methods. A separate committee of the MRO Board acts as the Hearing Body, consistent with the uniform CMEP.

MRO uses its own processes that are not reviewed and approved by NERC in several areas. One such process is the incident inquiry process to triage certain issues, which is more informal than the NERC Compliance Inquiry Process, with Regional input, which allows for data retention holds and information that is submitted under oath. Also, MRO originally developed a compliance information system approximately eight years ago called the Compliance Data Management System (current version 4.0) and is one of the two Regional Entities using this system, which is now owned and managed by a third-party vendor.

#### Overall Effectiveness

In summary, NERC sees MRO as an effective Regional Entity as demonstrated by several performance metrics. MRO is timely in determining whether a possible violation is an alleged violation, reporting the alleged violation to NERC and issuing a NAVAPS.

Areas for improvement include providing accurate statements of fact for each violation and assessing penalties according to the facts of each situation pursuant to FERC orders. In addition, NERC encourages MRO to assess non-zero penalties where appropriate.

NERC continues to seek consistency and uniformity of compliance activities across the Regions and has some concerns about some methods employed by MRO. While these methods may be effective, they are not consistent with NERC practices. NERC will work with MRO to modify its practices to ensure consistency with other Regions and NERC, while not detracting from MRO's demonstrated performance.

NPCC

<b>Alleged Violations per Registered Function</b>	<b>Registered Functions per FTE</b>	<b>Percent of Active Alleged Violations Deriving from Failure to Perform</b>	<b>Percent of Alleged Violations Submitted to NERC as a NOCV or Settlement for Review</b>	<b>Average Time to Determine if a Possible Violation is an Alleged Violation</b>	<b>Percent of Alleged Violations Approved by the BOTCC</b>
<b>0.12 (8)</b>	<b>60.4 (8)</b>	<b>33% (8)</b>	<b>46% (5)</b>	<b>25.7 (6)</b>	<b>21% (4)</b>

NPCC is a cross-border Regional Entity encompassing New York and New England in the United States as well as Nova Scotia, New Brunswick, Quebec, and Ontario in Canada.

NPCC is the third largest Region in terms of registered entities (268) and the fourth largest in terms of registered functions (544). As of May 31, 2009, NPCC has reported 72 possible violations of reliability standards (five of which are from Canadian entities), with nine dismissals. NPCC ranks eighth in terms of number of alleged violations reported (63). NPCC's ratio of alleged violations per registered function (0.12) is the lowest among the Regions.

NPCC has confirmed 29 (46 percent) of its alleged violations and submitted them to NERC in the form of either a NOCV or Settlement Agreement for review. NPCC has achieved BOTCC approval of thirteen of these submittals, placing NPCC fourth among the Regions for percentage of alleged violations approved by the BOTCC. To date, NPCC has recommended non-zero dollar penalties for 12 alleged violations, which is 41 percent of the alleged violations NPCC has submitted to NERC for review. One-third of NPCC's Active Violations are derived from failure to perform requirements of reliability standards, while two-thirds are a result of a failure to document as required.

NPCC on average has taken about 26 days from the time it finds a possible violation to determine if an alleged violation exists, which is the third longest among the Regions. However, NPCC has taken, on average, only about nine days (the third shortest time among the Regions) to report alleged violations to NERC. NPCC has also issued NAVAPS for all its alleged violations in less than 100 days.

NPCC has nine FTEs dedicated to compliance activities in the 2009 budget. NPCC also uses contract resources to augment its staff on compliance audits. NPCC is seventh in terms of FTEs committed to the compliance program. NPCC has the highest ratio of registered functions per FTE (60.4) among the Regions.

NPCC spent considerable time and effort on the initial process to register bulk power system owners, operators, and users. Its efforts included a high level of confirmation of the registered entities' functional responsibilities. NPCC is currently in the process of reviewing and possibly revising its definition of the Bulk Electric System. Expansion of the definition may

result in additional registered entities and associated functions, which may place additional burden on NPCC compliance staff resources.

NPCC procedures provide for use of its compliance committee for technical review of compliance matters. FERC has required NPCC to report each such request and its outcome. To date, NPCC has not used this process.

NPCC has conducted two CVIs. The first was related to a June 27, 2007 event and the second was initiated on August 8, 2008. The first CVI was closed in November of 2007. The second CVI is currently in the final phase and a draft CVI report has been issued. NPCC, like all Regional Entities has very limited experience with investigations of enforceable standards and NERC has communicated to NPCC concerns that NPCC’s evidence gathering process and depth and thoroughness of its review of evidence should be improved. NERC considers this issue to be transitional.

NPCC conducted 50 compliance audits in 2008. It also conducted two compliance workshops.

NPCC has also closed investigations over the objections of NERC and FERC, and was also initially reluctant to issue remedial action directives but has since taken that action.

Overall Effectiveness

In summary, NERC views NPCC as a relatively effective Regional Entity that is processing and completing identified violations in a timely manner. NPCC is also demonstrating a willingness to assess non-zero penalties. NPCC has conducted two CVIs. NPCC is using the same data management system as NERC and the majority of the Regional Entities.

NERC has a concern regarding the low level of alleged violations per registered function in NPCC and whether NPCC is identifying all the violations that are occurring, specifically failures to perform requirements of reliability standards. NERC will continue to work with NPCC to improve the thoroughness of its CVI process.

**ReliabilityFirst**

<b>Alleged Violations per Registered Function</b>	<b>Registered Functions per FTE</b>	<b>Percent of Active Alleged Violations Deriving from Failure to Perform</b>	<b>Percent of Alleged Violations Submitted to NERC as a NOCV or Settlement for Review</b>	<b>Average Time to Determine if a Possible Violation is an Alleged Violation</b>	<b>Percent of Alleged Violations Approved by the BOTCC</b>
<b>0.19 (5)</b>	<b>29.3 (3)</b>	<b>67% (3)</b>	<b>16% (7)</b>	<b>25.0 (5)</b>	<b>7% (5)</b>

ReliabilityFirst is the second largest Region in terms of registered entities (357) and in terms of registered functions (674). ReliabilityFirst has reported 142 possible violations of reliability standards, placing it fourth in this category, with 17 dismissals (12 percent). ReliabilityFirst's ratio of alleged violations per registered function (0.19) falls in the median range of the Regions. Of its active violations, ReliabilityFirst identified 67 percent as violations caused by a failure to perform requirements of reliability standards; which places ReliabilityFirst at the third highest percentage in this category.

ReliabilityFirst has confirmed 20 (16 percent) of its alleged violations and submitted them to NERC staff in the form of either a NOCV or Settlement Agreement for review. ReliabilityFirst has achieved BOTCC approval of nine of these submittals, representing a seven percent completion rate over the last two years and placing ReliabilityFirst fifth out of the eight Regions. To date, ReliabilityFirst has recommended non-zero dollar penalties for seven violations. ReliabilityFirst was the first Regional Entity to submit, and obtain NERC and FERC approval of, a non-zero financial penalty for a violation of a Reliability Standard. One registered entity contested an alleged violation within ReliabilityFirst but the matter moved to settlement discussions; a settlement was recently submitted to NERC for approval.

ReliabilityFirst on average has taken 25 days from the time it finds a possible violation to determine if an alleged violation exists and about 10 days to report an alleged violation to NERC. Of its 125 alleged violations, ReliabilityFirst has 34 violations that did not receive a NAVAPS for more than 100 days, including 1 violation that did not receive a NAVAPS for more than 300 days.

ReliabilityFirst has 23 FTEs dedicated to compliance activities in the 2009 budget. ReliabilityFirst is second in terms of total FTEs committed to the compliance program and has the fourth highest ratio of registered functions per FTE, at 29.3.

ReliabilityFirst has initiated three CVIs. While none have been closed, one is in the final phase and a draft report has been provided to NERC. ReliabilityFirst asked NERC to initiate a CVI for one additional event due to limited ReliabilityFirst resources available to conduct the additional CVI.

ReliabilityFirst completed 12 on-site and 47 off-site audits in 2008.

### Overall Effectiveness

In summary, ReliabilityFirst is below the Regional average in the percent of alleged violations submitted to NERC as a NOCV or Settlement for review, but has lower times to determine if a possible violation is an alleged violation and to report an alleged violation to NERC than the average for the Regional Entities. ReliabilityFirst does have a relatively high number of violations that have not received a NAVAPS for more than 100 days and one violation that has not received a NAVAPS for more than 300 days

ReliabilityFirst has processed mitigation plans for all of the alleged and confirmed violations within the Region. The ReliabilityFirst Compliance Program has been independently

audited by NERC and its outside auditing firm, with no material deficiencies found. ReliabilityFirst does need to find ways to increase the efficiency with which it conducts its enforcement activities, and NERC will work with ReliabilityFirst to identify and implement necessary improvements.

### SERC

<b>Alleged Violations per Registered Function</b>	<b>Registered Functions per FTE</b>	<b>Percent of Active Alleged Violations Deriving from Failure to Perform</b>	<b>Percent of Alleged Violations Submitted to NERC as a NOCV or Settlement for Review</b>	<b>Average Time to Determine if a Possible Violation is an Alleged Violation</b>	<b>Percent of Alleged Violations Approved by the BOTCC</b>
<b>0.38 (3)</b>	<b>29.6 (4)</b>	<b>54% (7)</b>	<b>51% (4)</b>	<b>10.4 (1)</b>	<b>46% (2)</b>

SERC is the fourth largest Region in terms of registered entities (226) and third largest in terms of registered functions (636.) As of May 31, 2009, SERC reported 282 possible violations of reliability standards, placing it second in that category, with 43 dismissals. SERC's ratio of alleged violations to registered functions (0.38) is higher than the median range across the Regions. SERC's active violations are divided approximately evenly between violations resulting from a failure to perform requirements of reliability standards (54 percent) and a failure to document (46 percent).

SERC has confirmed 122 of its alleged violations (51 percent) and submitted them to NERC in the form of either a NOCV or Settlement Agreement for review. SERC has achieved BOTCC approval of 110 of these submittals, placing SERC second highest in percentage of alleged violations approved by the BOTCC. To date, SERC has recommended non-zero dollar penalties for 40 violations.

SERC, on average, has taken about ten days (the shortest time among the Regions) from the time it finds a possible violation to determine if an alleged violation exists and about eight days (the second shortest time among the Regions) to report an alleged violation to NERC. SERC has 21 violations that did not receive a NAVAPS for more than 100 days and 19 of those did not receive a NAVAPS for more than 300 days.

With 21.5 dedicated compliance FTEs in its 2009 budget, SERC is third in terms of FTEs committed to the compliance program, and is fourth lowest in the ratio of registered functions per FTE at 29.6. SERC continues to use industry volunteer subject matter experts on compliance audits to augment its staff.

SERC has established a Board Compliance Committee. SERC compliance staff works independently, without guidance or interaction with the Board Compliance Committee, to complete all of the steps in the Regional Entity compliance process except final approval before submittal to NERC. The steps conducted independently by compliance staff include evaluating

whether a sufficient basis exists for an alleged violation, issuing a NOAV, confirming a violation, developing proposed sanctions and penalties, negotiating settlements, and reviewing mitigation plans for acceptability. During this time, SERC compliance staff does not consult with the Board Compliance Committee and all information regarding a particular alleged violation remains confidential with the compliance staff only. At the conclusion of the staff's work, prior to filing with NERC, the staff conducts a final review of the confirmed violations, penalties and sanctions, and mitigation plans with the Board Compliance Committee and the committee approves the submittal of the actions produced by staff to NERC. From time to time, the Board Compliance Committee may remand a proposed action to staff for further work. But at no time does the committee become involved in determining the outcomes related to a violation or penalty. Final approval of SERC compliance actions by the Board Compliance Committee is a means of acknowledging SERC's submittals of compliance actions are submittals of the SERC Reliability Corporation and not simply the opinions of individual staff members.

SERC has opened one CVI for an event within SERC. SERC has also conducted 59 compliance audits and three compliance workshops in 2008.

#### Overall Effectiveness

In summary, while there is no prescriptive method for determining staffing levels, SERC appears to have staffed well with one dedicated FTE per every 29.6 registered functions. SERC is first in number of violations processed to BOTCC approval per FTE. SERC's active violations are about evenly divided between violations caused by failure to perform requirements and violations caused by failure to document. SERC is timely in its determination if a possible violation is an alleged violation and in reporting alleged violations to NERC. The one area where SERC has not been timely is in cases where a NAVAPS has not been issued for 100 days and, in some cases, for more than 300 days. SERC has recommended non-zero penalties for 40 violations (33 percent of those submitted to NERC staff for review.)

SERC was the second Regional Entity to have its compliance program audited by NERC, and no material deficiencies were found in SERC's practices. NERC views SERC as a very effective Regional Entity. NERC looks to SERC to improve upon its current good practices and to specifically improve upon its timeliness in issuing NAVAPS. NERC will work with SERC to share its good practices across the other Regions, with the aim of improving the output and efficiency of all Regional compliance programs.



**SPP Regional Entity**

<b>Alleged Violations per Registered Function</b>	<b>Registered Functions per FTE</b>	<b>Percent of Active Alleged Violations Deriving from Failure to Perform</b>	<b>Percent of Alleged Violations Submitted to NERC as a NOCV or Settlement for Review</b>	<b>Average Time to Determine if a Possible Violation is an Alleged Violation</b>	<b>Percent of Alleged Violations Approved by the BOTCC</b>
<b>0.20 (4)</b>	<b>47.3 (7)</b>	<b>72% (2)</b>	<b>61% (1)</b>	<b>44.7 (7)</b>	<b>10% (6)</b>

SPP RE is the seventh largest Region in terms of registered entities (115) and sixth largest in terms of registered functions (378.) SPP RE has reported 78 possible violations of reliability standards, placing it sixth among the Regions in this category, with only 1 dismissal. SPP's ratio of alleged violations per registered functions (0.20) is below the average among the Regions, but close to the median value. SPP RE's active violations are heavily weighted toward violations that result from a failure to perform requirements of reliability standards (72 percent).

SPP RE has confirmed 47 (61 percent) of its alleged violations and submitted them to NERC staff in the form of either a NOCV or Settlement Agreement for review. This is one of the highest confirmation percentages across the Regions. However, SPP RE has achieved BOTCC approval of only eight of these submittals, placing SPP RE among the four Regions with the lowest percentage of alleged violations approved by the BOTCC. SPP RE has recommended a non-zero dollar penalty for one violation.

SPP RE on average has taken about 45 days from the time it finds a possible violation to determine if an alleged violation exists and about 13 days to report an alleged violation to NERC. SPP RE has 11 violations that did not receive a NAVAPS for more than 100 days.

With eight compliance FTEs in its 2009 budget, SPP RE is eighth in terms of FTEs committed to the compliance program and, with a ratio of 47.3 registered functions per FTE, has the second highest ratio among the Regions.

SPP RE has not opened or conducted any CVIs to date. However, NERC is conducting one CVI within SPP due to a potential conflict of interest for SPP RE. SPP conducted 11 on-site audits and 11 off-site audits in 2008.

SPP RE is one of the two Regions using the Compliance Data Management System, now owned and managed by a third-party software vendor.

NERC and FERC have had issues with the depth and thoroughness of SPP RE's audits, and issues have arisen with SPP RE's sharing information with FERC. NERC notes that there have been events within the SPP RE footprint that NERC and FERC became aware of with which SPP RE had no knowledge.

Overall Effectiveness

NERC has found SPP RE to be one of the less effective Regional Entities in administering its compliance program to date. SPP RE is the second slowest to determine if a possible violation is an alleged violation. While SPP RE is the highest in percentage of alleged violations submitted to NERC for review, only 17 percent of those have been approved by the BOTCC. Of SPP RE's active violations, the majority have resulted from a failure to perform requirements of standards. SPP RE has recommended a non-zero penalty for only one of the 47 violations submitted to NERC staff for review.

NERC commends SPP RE for its ability to accurately identify high risk violations. However, NERC is concerned about SPP RE's ability to timely process alleged violations to completion, and its situational awareness capabilities. NERC will continue to monitor SPP RE and suggest necessary improvements to its compliance and enforcement processes.

Texas Regional Entity

<b>Alleged Violations per Registered Function</b>	<b>Registered Functions per FTE</b>	<b>Percent of Active Alleged Violations Deriving from Failure to Perform</b>	<b>Percent of Alleged Violations Submitted to NERC as a NOCV or Settlement for Review</b>	<b>Average Time to Determine if a Possible Violation is an Alleged Violation</b>	<b>Percent of Alleged Violations Approved by the BOTCC</b>
<b>0.19 (5)</b>	<b>24.0 (1)</b>	<b>81% (1)</b>	<b>52% (3)</b>	<b>18.4 (3)</b>	<b>50% (1)</b>

Texas Regional Entity (TRE) is the fifth largest Region in terms of registered entities (218) and seventh largest in terms of registered functions (340.) As of May 31, 2009, TRE has reported 68 possible violations of reliability standards, placing it eighth in this category, with 4 dismissals. TRE's ratio of alleged violations to registered functions (0.19) is below the average of the Regions. TRE's active violations are weighted heavily toward violations resulting from a failure to perform requirements of reliability standards (81 percent) and it is the Region with the highest percentage in this category.

TRE has confirmed 33 (52 percent) of its alleged violations and submitted them to NERC in the form of either a NOCV or Settlement Agreement for review. TRE has achieved BOTCC approval of 32 of these submittals, placing it first in percentage of alleged violations approved by the BOTCC. To date, TRE has recommended non-zero dollar penalties for three (9 percent) of the violations submitted to NERC.

TRE, on average, has taken 18 days from the time it finds a possible violation to determine if an alleged violation exists and only about three days (the shortest time across all Regions) to report an alleged violation to NERC. TRE has 18 violations that did not receive a NAVAPS for more than 100 days.

TRE is a division of ERCOT, Inc. NERC has led compliance audits and CVIs of ERCOT. Within TRE, contested alleged violations are to be heard by the Texas Public Utility Commission. To date, no alleged violations have been contested.

On May 16, 2008 TRE initiated a CVI in regards to the ERCOT wind event. TRE’s initial focus was on approximately 20 generation operators, including wind plants. This CVI included a number of entities to be investigated. NERC’s observation is that TRE has been conducting a thorough CVI. TRE has faced challenges in driving completion of this CVI, as there was difficulty in finding concurrent time frames to meet and discuss evidence and other work responsibilities. Completion of this CVI has been delayed several times due to staff unavailability while assigned to audits. This is the only CVI Texas has conducted.

TRE conducted 40 audits in 2008. It also conducted two compliance workshops and plans to conduct three more in 2009.

Overall Effectiveness

NERC rates TRE as an effective Regional Entity. It has the lowest number of registered functions per FTE, and its ratio of alleged violations per registered function is 0.19.

NERC commends TRE for its focus on identifying the higher risk violations that result from failure to perform requirements of reliability standards. NERC has questions about the contrast between the high percentage of “failure to perform” violations and low number of violations recommended for a non-zero penalty. NERC will work with TRE to gain a better understanding of this situation.

TRE excels in getting the alleged violations processed through completion with 97 percent of the violations submitted to NERC for review now approved by the BOTCC.

WECC

<b>Alleged Violations per Registered Function</b>	<b>Registered Functions per FTE</b>	<b>Percent of Active Alleged Violations Deriving from Failure to Perform</b>	<b>Percent of Alleged Violations Submitted to NERC as a NOCV or Settlement for Review</b>	<b>Average Time to Determine if a Possible Violation is an Alleged Violation</b>	<b>Percent of Alleged Violations Approved by the BOTCC</b>
<b>0.89 (1)</b>	<b>41.7 (5)</b>	<b>54% (3)</b>	<b>11% (8)</b>	<b>54.3 (8)</b>	<b>1% (7)</b>

WECC is the largest Region in terms of registered entities (467) and registered functions (1,250). WECC initially implemented the CMEP based on the efforts undertaken in WECC’s predecessor Reliability Management System. To date, WECC has reported 1,839 possible violations of reliability standards, with 726 dismissals. This is the highest number of possible

violations reported by any Region. WECC's ratio of alleged violations to registered functions (0.89) is high in comparison to the other Regions.

WECC has confirmed 126 (11 percent) of its alleged violations and submitted them to NERC in the form of either a NOCV or Settlement Agreement for review. WECC has achieved BOTCC approval of 11 of these submittals, placing it lowest in percent of alleged violations approved by the BOTCC. It should be noted that eight of WECC's 11s violations processed through to BOTCC approval were completed since March 2009. To date, WECC has recommended non-zero dollar penalties for 31 (25 percent) of the 126 violations submitted to NERC for review.

WECC on average has taken over 54 days (the longest time among the Regions) from the time it finds a possible violation to determine if an alleged violation exists and over 18 days to report an alleged violation to NERC.<sup>5</sup> WECC has 433 violations that did not receive a NAVAPS for more than 100 days, and of those, 161 did not receive a NAVAPS for more than 300 days.

With 30 compliance FTEs in its 2009 budget, WECC is first in terms of FTEs committed to the Compliance Program and, at 41.7 registered functions per FTE, WECC has the fourth highest ratio of registered functions per FTE.

WECC conducts the most compliance outreach activities of any Region with multiple compliance program workshops and a regularly scheduled open-mike call for registered entities, and has a Western Interconnection Compliance Forum as well as a Compliance Users Group. Nonetheless, WECC received the most stakeholder comments of any Regional Entity related to its CMEP. Many of the comments related to the speed of processing and unresponsiveness of the Regional Entity to questions by registered entities.

Data reporting and management has been challenging in WECC with the extensive volume of potential violations reported. Earlier data reporting and management issues have been resolved, and WECC has committed to the portal system used by NERC and six other Regional Entities.

WECC serves as the Reliability Coordinator (RC) for the Western Interconnection and the Interchange Authority (IA) for the United States portion of the Western Interconnection. NERC has entered into an agreement with WECC to serve as the Compliance Enforcement Authority for the RC and IA functions for which WECC is a registered entity.

WECC has had limited success in conducting CVIs. CVIs were opened by WECC on August 29, 2007 and September 7, 2007 and have been completed. However in one CVI, WECC concluded there was insufficient information to determine whether a violation occurred. NERC has directed WECC to make a final determination if a violation occurred or conclude that no violation occurred. On February 14, 2008 WECC opened a CVI in regards to a system disturbance. Due to potential conflicts of interest with WECC reliability coordinators, NERC

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<sup>5</sup> WECC reports about 20 violations have been re-entered in the system because of entities purchasing other entities.

has assumed the responsibility for this CVI. Finally, on April 11, 2008 WECC opened a CVI in regards to a self reported violation. NERC has not received a final CVI report from WECC in regards to this CVI. With the extensive compliance activities in WECC, managing the time lines and conducting CVIs has presented challenges to WECC.

WECC conducted 276 compliance audits in 2008.

Due to the large backlog of violation processing, WECC cancelled all compliance audits during the fourth quarter of 2008 without coordinating this action with NERC. This will require WECC to increase its audit efforts in 2009 and 2010 to complete audits of all Balancing Authorities and Transmission Operators on the three-year cycle as required by the NERC Rules of Procedure and the delegation agreement. WECC also took several other unilateral actions, including: opting to rely solely on the certification of a registered entity as the verification of the completion of mitigation plans; implementing proposed agreements between WECC and certain registered entities regarding compliance obligations; and issuing compliance bulletins providing independent interpretations of, or guidance related to, certain requirements of NERC Reliability Standards. NERC will work closely with WECC's new director of compliance to address these issues.

#### Overall Effectiveness

NERC has found WECC to be one of the less effective Regional Entities in carrying out the compliance enforcement program to-date. The active violations in the WECC Region are split fairly evenly between violations resulting from a failure to perform requirements (54 percent) and violations resulting from a failure to document performance (46 percent). WECC experienced a large volume of initial violation self reports between July 2007 and July 2008 and has been attempting to bring these alleged violations to completion. WECC has a long way to go to complete this effort, with only 11 violations out of 1,113 post-June 18, 2007 alleged violations approved by the BOTCC.

However, more recently, during April and May, 2009, WECC has made significant strides toward improvement, and while it is not yet noticeable in the statistics, NERC recognizes and applauds this effort. Observed improvements have included greater success in processing WECC's backlog of violations, as noted by the recent increase in violations approved by the BOTCC and through other efforts to reduce the number of outstanding violations. NERC encourages WECC to continue its efforts in this regard. NERC also suggests that WECC create a stronger separation of its compliance encouragement efforts (training, workshops, etc.) from its enforcement activities, examine its staffing level and compliance processes, and stay focused on reducing its backlog of alleged violations and processing violations to completion.

### C. Issues Concerning All Regional Entities

The key issues identified by stakeholders and NERC concerning the Regional Entity compliance programs are discussed below as well as in **Attachment 2**.

#### Issue: Consistency and Oversight by the ERO

Numerous stakeholder comments pointed to the need for NERC to take a stronger leadership role in eliminating differences among Regional Entities and to ensure uniformity and consistency across all Regions. Some commenters stated that participation of NERC personnel in audits helps promote inter-Regional consistency; some suggested additional presence by NERC staff on compliance audits.

Prior to certification of NERC as the ERO, NERC and the Regional reliability councils had established compliance monitoring programs based on the voluntary regime. While this helped prepare NERC and the Regions for the task ahead, these programs were operated as autonomous Regional programs with very limited reporting to NERC beyond high-level annual program results. Each of these programs had been developed by the Regional reliability councils and their members for the purpose of preparing for mandatory standards. When these programs were developed, NERC and the Regions had little experience with monitoring compliance and much was learned by initially allowing a great deal of flexibility in the implementation of the programs.

With the certification of NERC as the ERO, the Commission, NERC, the Regional Entities, and the industry sought to have a single, uniform, and consistent CMEP established across North America. Stakeholders expressed interest in two kinds of consistency. First, consistency of process; this is especially important for larger entities with business in multiple Regions, where significant improvements can be made with common forms and procedures. Second, consistency of result; the same requirement should be interpreted the same way in each Region, and similarly situated entities should be treated the same for violations of the same requirement.<sup>6</sup> The currently effective delegation agreements provide a general framework for the Regional CMEPs, but they do not do as much as they could to ensure the consistency, effectiveness, and efficiency that NERC, stakeholders, and the Regional Entities themselves desire. The current delegation agreements expire in May 2010. NERC and the Regional Entities will have the opportunity to address these issues on a systematic basis in the renegotiation of those agreements.

#### Issue: Reliability Standard Audit Worksheets

NERC developed a series of Reliability Standard Audit Worksheets (RSAWs) to provide a common basis for auditors to conduct audits in eight separate Regional Entities. These audit worksheets were provided to the Regional Entities and the industry to serve as guides for auditing and to help identify the types of evidence needed to support compliance. Registered

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<sup>6</sup> This consistency of result should always be a goal to be pursued, but especially in enforcement cases, facts matter; differences in facts can lead to different results.

Entities are encouraged to use the RSAWs in their internal compliance programs and to prepare for compliance audits conducted by the Regional Entities, and are required by some Regional Entities to complete the questions in the RSAWs and submit the responses to the Regional Entity prior to the commencement of an audit. The RSAWs are not definitive as noted in their disclaimer, but rather guidance, and registered entities should be able to present alternative evidence of compliance.

NERC has undertaken an initiative to review and update the current RSAWs and create new RSAWs for standards and requirements that need them. This effort will bring a higher level of consistency and uniformity in compliance audits, as well as address other concerns that registered entities have raised about the form and organization of the RSAWs. It should also allay concerns raised by stakeholders that the tools Regional Entity and NERC auditors rely upon to audit compliance should not extend beyond the terms of the Commission-approved standards.

**Issue: Compliance Reporting and Data Management**

NERC and the Regional Entities implemented the mandatory CMEP on June 18, 2007 with a series of data management tools based on a variety of data platforms and tools. These tools were generally extensions of the tools in existence prior to the standards becoming mandatory. Generally, the data collection tools have served their purpose in the early stages of program implementation to collect and report compliance information. However, since these tools were not developed on a single platform and from a single vision, data and document management has not been as effective among the Regional Entities and NERC as it could be. While a number of enhancements have been made to these data management systems and future consolidations are planned to improve efficiency, a single central data hub concept has not been implemented.

The ERO's data management and records must be developed and maintained as a central data hub for compliance information with a seamless flow of data from and, as appropriate, to, all Regional Entities, registered entities, and regulators. The entire platform should be developed on a common database to provide redundancy of information. For example, when an entity is alleged to have violated a standard in one Region, the ability to quickly review the entity's performance across NERC with regard to reliability standard violations should be available to all Regions. Such a system requires a single data hub and the use of a single platform across all entities.

NERC and the Regional Entities have work underway to develop a centralized data hub that can accommodate the existing systems being used by the Regions. Six of the Regions and NERC are committed to a single vendor system, which NERC deems to be the most cost-effective approach. Two Regions utilize a separate platform for the collection of data from the registered entities. Such a system will enable NERC and the Regions to quickly obtain information about registered entities and their performance in every Region in which they perform a registered function. Further, some registered entities have expressed a desire for a single reporting system to improve consistency in application of the programs and avoid the need to train their personnel to work with multiple reporting systems and schedules. Some stakeholder comments highlighted issues with reporting compliance information to the Regional

Entities. Recent changes in reporting software and tools and additional changes that are underway should help improve the reporting and management of compliance data and information from the registered entities, as well as to regulatory authorities. The work to improve data management and records must continue. The development and maintenance of such tools should also be considered as the delegation agreements are renegotiated in the coming months to determine if a system funded at the NERC level and a users group including the Regions should be established.

**Issue: Communication Management**

Stakeholder comments identified communication of lessons learned and other information regarding compliance as an issue. NERC has suggested the development of a knowledge management or information management platform where such information would reside and be fully searchable by anyone seeking information related to compliance with reliability standards. However, additional budgeted funding will be necessary to proceed with this project. In the meantime, NERC has undertaken an effort to implement and update a Q&A Website to provide some key information, and is working to consolidate information provided by the Regional Entities into a single, NERC endorsed collection of information related to compliance.

As stated earlier, NERC has also undertaken an initiative to review and update the current RSAWs and create new RSAWs for standards and requirements where no such worksheets existed before.

Communication of compliance program expectations, results, trends, and information is an effort within NERC itself, currently coordinated by NERC's manager of communications. However, little has been done to coordinate the communications conducted by the Regional Entities. Regional Entities have conducted compliance workshops for their constituents and in some cases have engaged NERC staff as a presenter to provide an overall ERO perspective. Additionally, several Regional Entities have begun to make presentations regarding the ERO and Regional compliance programs at national seminars.

The Regional Entities have also developed a Website where information is provided regarding compliance with the standards, application of the standards, and in some cases interpretation of the standards through the lessons learned during audits. To make that material useful to all stakeholders, especially those with business in multiple Regions, NERC and the Regional Entities will need to develop mechanisms to ensure the material is properly reviewed for consistency with other interpretations and applications of the Reliability Standards. Once such material is posted for use by stakeholders, the Regional Entities will be able to make use of the posted material in a consistent manner.

NERC and the Regional Entities need to work together on a more coordinated corporate communication strategy for compliance in which Regional Entity communications are coordinated for content and consistency with NERC's objectives. Such a communication strategy will need to address communication with the industry, regulators, and internal staff including the Regional Entities and must include the NERC Website for compliance information.



Consideration should be given to including provisions on coordination of corporate communication plans in the next generation of the delegation agreements.

**Issue: Backlog, Volume of Work, and Output**

Many commenters expressed their concerns regarding the volume of work facing the Regional Entities and NERC as well as the desire to see violations, settlements and mitigation plans processed to completion, and therefore made public, in a more expeditious manner. Having enforcement actions completed and made public provides valuable lessons learned to the industry stakeholders and provides guidance for improving reliability performance. While increasing the output of the compliance program is primarily a resource issue, other steps can be taken to improve speed and output, as discussed below. It is fair to say, however, that neither NERC nor the Regional Entities were prepared for the volume of compliance work that has emerged in the wake of the standards becoming mandatory and enforceable on June 18, 2007, particularly in combination with the substantial number of self-reported violations that were submitted by entities for the pre-June 18, 2007 period. Beginning with the self-reported violations from the pre-June 18, 2007 period, NERC and the Regional Entities have been inundated with self-reports of, and findings of alleged violations of reliability standards.

**Issues: Overall Volume of Work and Compliance Program Outputs**

Specific issues related to the backlog, overall volume of work and the outputs of the compliance program are described below.

**Prioritization**

With the number of violations reported in the first 24 months of mandatory reliability standards, prioritization of the violations by NERC and the Regional Entities is necessary. Prioritizing based on the risk to reliability or the VRF is one method; however, a registered entity is likely to want to process all of its violations in a single settlement agreement or other enforcement action. Such an approach would allow the Regional Entities to move a large block of their backlog through the process if a settlement offer were to be proffered for all the violations a given registered entity has in the process; however, such a method would require agreement between the registered entity and the Regional Entity. Similarly, NERC encourages multi-Regional settlements for registered entities crossing several Regions as a means to administratively bundle-up several violations.

**Documentation Related Violations**

Approximately 44 percent of all standard violations to-date are documentation violations, meaning that the entity is performing the task required by the standard (including having a required document), but may not have documented evidence to demonstrate compliance. Processing these violations along with the non-documentation violations can result in a less efficient program and slower average processing time due to the sheer volume of documentation violations. Documentation is necessary to demonstrate compliance to the Compliance Enforcement Authority and a lack of documentation reflects negatively on the registered entity's

internal compliance program. Each requirement in the standard is given a VRF and many of the documentation requirements are assigned a lower VRF.

As part of the review of the standards it is fair to question if all documentation requirements in a standard should rise to the level of being an enforceable requirement in the standard. This review should be part of the Reliability Standards Development Plan.

Identifying and removing from standards any requirements related to documentation that are not necessary will reduce the volume of work, and focus the compliance monitoring and enforcement activities on those requirements of the standards where an entity is required to perform a function or task. These more important requirements that need to be retained in the standards include having certain documents such as a system restoration plan or an emergency operations plan. The compliance administration elements could then include the data retention requirements and documentation necessary to demonstrate compliance.

### **Discretion in Processing Alleged Violations**

The processing of each alleged violation of a reliability standard carries with it full due process for the registered entity in accordance with the process steps included in the CMEP. Processing all alleged violations in this manner is inefficient and may not be an effective use of resources, particularly for those violations of much less significance to the reliability of the bulk power system. Twenty-four months have provided insufficient experience to assess which reliability standards could be classed as having little or no impact on bulk power system reliability, and for which, therefore, the Compliance Enforcement Authority should have greater discretion to determine whether a notice of alleged violation and a proposed penalty should be assessed and processed for a noncompliance. However, as noted earlier, there are a number of violations that are classed as documentation related. A more effective, but longer term, solution may be to assess if these requirements should be mandatory and enforceable as requirements in the standards in the first place. However, the ability to report and track resolution through mitigation of administrative or less-severe violations, rather than prosecute all violations, may provide significant benefits to the industry and those who enforce standards. Alternatively, a “speeding ticket” or “warning ticket” type of notice would afford increased efficiency while maintaining program integrity.

### **Pro-Forma Settlement Agreement**

NERC and the Regional Entities have developed a pro-forma settlement agreement to be used for a set of standards and requirements where the entity is performing the necessary task, but certain documentation may be missing or incomplete. This agreement would be a shorter version of the standard settlement agreement with pre-programmed terms and conditions to expedite processing.

For a pre-defined set of reliability standard requirements and for a given set of circumstances, a pro-forma settlement agreement can be presented to the registered entity stating the terms and conditions of the settlement. Use of the pro-forma settlement agreement eliminates some of the administrative process to bring a violation to the filing stage. However,

the Commission may need to accept an abbreviated record for such a filing. At this time, there are only a limited number of the current reliability standard violations in the queue that would be eligible for such treatment. Nonetheless, NERC still believes that such a process will be useful to process certain violations more quickly.

**Discretion to Report and Track Lower-Risk Violations, Rather than Prosecute All Violations**

Suggestions have been made that NERC should have the discretion to report and track lower-risk violations through mitigation, but not seek a formal Notice of Penalty for all violations. The ability to report non-serious and documentation-related violations to the Commission, rather than seek formal filing through Notice of Penalty, would increase process throughput, perhaps without adversely affecting bulk power system reliability, and provide more resources on more significant violations. This concept, similar to the Nuclear Regulatory Commission's "non-cited violations" approach, would eliminate all processing of the alleged violation and only record the warning as being issued.

Issuing a warning would not be materially different than issuing a Notice of Confirmed Violation or Settlement Agreement as described above with a zero-dollar penalty, with one exception: under the NERC *Sanction Guidelines*, in the event of future violations by the registered entity, the fact that the entity had previously committed violations is a factor taken into account in determining whether the penalty assessed should be increased over the base penalty amount for the violation. It would still be necessary to keep track of the warnings across all the Regional Entities. If an entity began to accumulate warnings, it would be a signal that a more serious intervention might be needed.

NERC does not believe a separate process for issuing warnings is warranted at this time. As with the pro-forma settlement agreement, mitigation of the alleged violation would be necessary and tracking the warnings issued would be required so Regional Entities and NERC would be aware if the registered entity had previously been issued a warning. Such tracking would need to be conducted across all Regions where the registered entity operates and would need to track whether the registered entity had received numerous prior "warnings," including multiple warnings concerning the same standard and/or requirement. The process would require considerable reporting and oversight to ensure fair, appropriate, and consistent application and to meet regulators' expectations. NERC does not see significant efficiency gains with such a process at this time.

**Enforcement and Mitigation Processes**

Enforcement and mitigation activities are currently carried out in the eight Regional Entities with NERC oversight, review, and approvals at the end of each of these processes. Regional Entities have performed well in identifying alleged violations as well as reviewing and accepting mitigation plans to address the shortcomings identified by the alleged violation. (Each mitigation plan must be submitted to the Regional Entity for acceptance and then submitted to NERC for approval. NERC has 30 days to approve or remand a mitigation plan once received from the Regional Entity (unless NERC extends the review period)).

Enforcement actions are initiated by the Regional Entity pursuant to the CMEP. The variability of time required to process enforcement actions, and of the results, has been greater than desired. However, no two violations are exactly the same in all their circumstances, so registered entities should expect some variability in enforcement actions. NERC believes more training, more experience, and more filings will reduce the band of variability in the future. NERC reviews and approves all enforcement actions once the Regional Entity believes it has completed all of the work associated with the violation. NERC is in the best position to assure consistency in enforcement actions.

Processing allegations of violations requires significant effort on the parts of all involved. The process begins in discovery. The Regional Entity completes an assessment and validation of the facts surrounding the violation and, if appropriate, issues a NAVAPS. To date, under the Rules of Procedure, NERC’s role on these notices has been limited although some Regions have requested early involvement from NERC. At this time, NERC has no process review of the initial notice or the record of the proceedings. The Regional Entity and the registered entity may also enter into settlement discussions at any time. Once the violation is confirmed or addressed through settlement at the Regional Entity, NERC receives the Notice of Confirmed Violation or settlement agreement from the Regional Entity for consideration. This is the first point at which, under the Rules of Procedure, NERC sees the record developed or documents supporting the violation.

The following is a simplified diagram of the process steps.

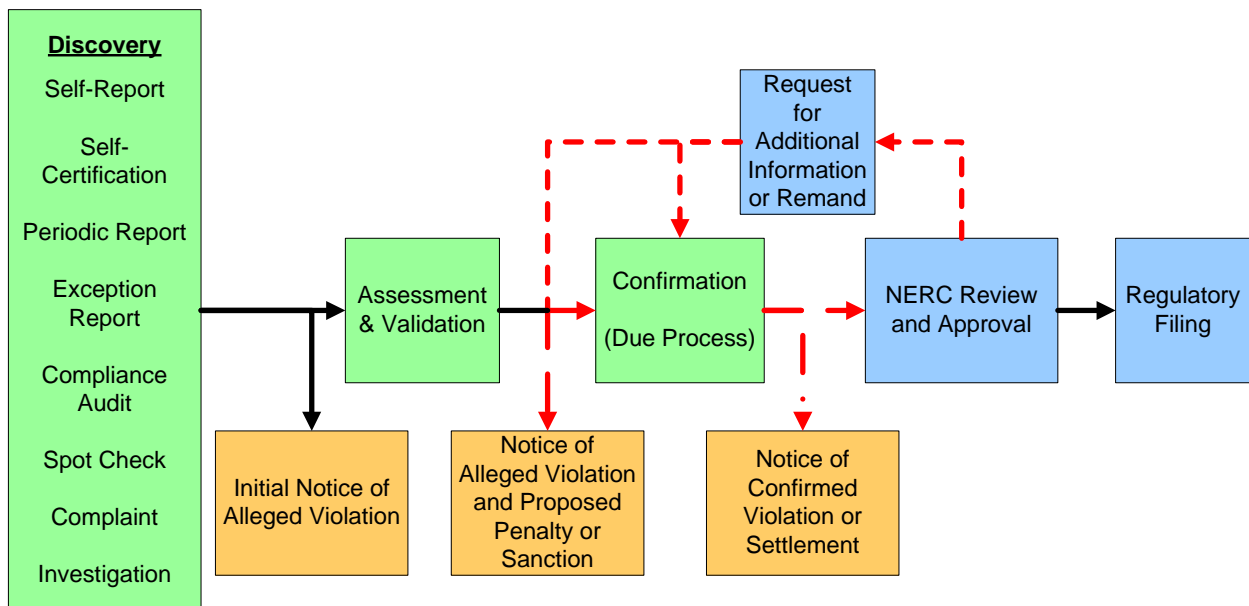


Figure 1 — Abbreviated Compliance Process Steps

The green boxes represent activities of the Regional Entities, the blue boxes those of NERC, and the tan boxes are the notices that go to a registered entity. NERC does not become involved with the establishment of the record of the proceeding until the end of the process. At that point,

NERC staff reviews all enforcement actions for completeness, accuracy, consistency, and conformance to the Commission orders for United States enforcement actions.

This process, as presently implemented, has required multiple loops back to the Regional Entities as enforcement actions are reviewed by NERC and sent back to the Regions for additional work. In almost every case considered to-date, additional information has been required from the Regional Entity to process the confirmed violation or settlement agreement to meet the objectives of NERC and the requirements of the Commission. (the Commission's July 3, 2008 Penalty Notice Guidance Order also played an important role in necessitating multiple reviews of each case.<sup>7</sup>) These loops have also necessitated reissuance of Notices of Alleged Violation and Proposed Penalty or Sanction to allow the registered entity fair due process rights to the content of the notices or revised enforcement actions. These steps, depicted by the red lines in the diagram, are highly inefficient for all parties including NERC, the Regional Entities, and registered entities, and have created significant delay in processing the alleged violations, consequently increasing the backlog.

Regional Entities play a key role with the discovery of alleged violations of the reliability standards and serve as the key interface between the registered entities and the ERO. However, efficiency could be gained by streamlining the interactions between the Regional Entities and NERC to eliminate the many loops back through the process in developing an adequate record and determining proposed penalties. As discussed in Attachment 2, NERC will provide the option for Regional Entities to ask for help and advice in advance of issuing Notices of Alleged Violation and Penalty or Sanction, or proffering proposed settlements to registered entities. The Regional Entities would continue to conduct the field work necessary to discover and process the violation, but would have the opportunity to engage NERC in the development of the NAVAPS or any proposed settlement or any subsequent step in the process, through the issuance of the Notice of Confirmed Violation, Notice of Penalty or Sanction, and entry into any Settlement Agreements. Alternatively, Regional Entities themselves will need to take on additional responsibility to ensure their collective actions achieve the consistency and efficiency that those subject to the reliability standards desire and deserve. NERC expects to consider these issues in negotiating the next generation of the delegation agreements.

**Issue: Multi-Region Registered Entities**

In the first 24 months of mandatory standards, it became apparent that a number of registered entities are operating in more than one Regional Entity footprint. (Most of the registered entities operating in multiple Regional Entity footprints are reliability coordinators, generation owners, and generation operators.) Some stakeholders who operate in more than one Region expressed concerns related to the duplication of effort on their part and the Regional Entities for monitoring compliance and enforcing the reliability standards, including duplication of audits and other CMEP processes, training their staff on each of the Regional Entity reporting and monitoring processes, and consistency in application across multiple Regional Entities. Their desire would be for the Regional Entities and NERC to identify a single Regional Entity or NERC to carry out the CMEP for their organization. Such an approach would eliminate the need

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<sup>7</sup> *Guidance Order on Reliability Notices of Penalty*, 124 FERC ¶61,015 (2008).

to train their staffs on multiple reporting forms and schedules as well as the possibility of inconsistent and duplicate compliance findings. This approach is being used with some registered entities. Regional Entities have also expressed concerns about findings made in neighboring Regions establishing precedent in their Region and the need to share information.

Duplication of effort by multiple Regional Entities is highly inefficient and may result in multiple registrations that could be unnecessary. Further, entities have from time-to-time moved to another Region based on markets available or cost structure within the Region. The CMEP is to be implemented uniformly and while small cost differentials may exist, it would be expected that the costs to execute the compliance programs would be very similar across all Regional Entities.

Funding of the CMEP is not dependent on membership of registered entities in the Regional Entity, and would have little effect on the Regional Entity budgets since funding is based on load serving entities operating in the Regional Entity footprint.

The Regional Entities are currently working to develop a formal, written process to allow coordination of audits and compliance reporting for those registered entities operating in multiple Regional Entities, as well as coordinated enforcement actions among the affected Regional Entities. Additionally, as described in **Attachment 2** (Organization Registration issue no. 4), NERC and the Registration Working Group are working to develop processes and procedures for issues associated with multi-Regional registered entities, including the possibility of a single registration process for those entities doing business in more than one Region.

### **Issues: Training and Education**

NERC received numerous comments from stakeholders related to increasing training for auditors to ensure consistent application of reliability standards by compliance audit teams across the Regional Entities and for additional educational opportunities for registered entities specifically on compliance and demonstrating compliance with the reliability standards.

### **Regional Entity and NERC Training**

NERC's Rules of Procedure require all Regional Entity and NERC staff participating on a compliance audit or CVI to complete the requisite NERC or NERC-approved training. NERC provides training in classroom settings for all audit team leaders and Web-based training for audit team members. The Regional Entities also have established separate training for auditors to supplement the NERC training. The Regional Entities and NERC desire additional training and better coordination in the development of training materials and curriculum.

As the NERC CMEP moves into the third year of enforcing mandatory standards, NERC will reevaluate the overall training provided. One consideration is the development and delivery of the training materials. Presently, NERC staff develops and delivers the training for compliance auditors. NERC training and education is considering a process of developing the necessary training objectives and using contract training organizations augmented by NERC subject matter expertise for the development of specific training materials and course work along

with delivery of the course work and certification of those trained. Training should be enhanced and expanded to provide for enhanced subject matter in order to increase the knowledge and expertise of those conducting compliance audits and investigations.

Registered entities continue to express a need for increased consistency in application of the reliability standards by NERC and the Regional Entities during audits, investigations, and other compliance activities. Consistency can be achieved through improved and increased training for NERC and Regional Entity staff.

### **Registered Entity Training**

Stakeholders have also expressed an increased need for education related to compliance with reliability standards and demonstration of compliance to auditors. Stakeholders have specifically requested that the training given to compliance auditors should also be made available to registered entities to help them understand what auditors are looking for to demonstrate compliance with standards. If additional education of the industry stakeholders by NERC is desired, additional funding will be necessary to provide expanded educational opportunities. This issue is discussed in more detail in **Attachment 2**.

## **IV. RELIABILITY ASSESSMENTS**

NERC works closely with the Regional Entities in collecting and analyzing data and information to prepare its seasonal, long-term, and special reliability assessments. This process, in which NERC has been engaged since 1970, has evolved considerably over the past nearly 40 years, with particularly significant improvements since NERC became the ERO. The following list of issues provides specific performance information and areas for improvement identified by NERC for the Regional Entities with respect to reliability assessments.

### **Issue: Data Checking and Validation**

- Continue the development and use of more robust “portal” systems and other automatic data collection processes for gathering data from registered entities to increase accuracy and efficiency and to minimize errors
- Develop independent ways to validate long-term supply data, especially in those areas with short-term forward capacity markets
- Ensure that the data provided fully supports what has been requested
- Engage NERC staff with potential data issues prior to reporting

### **Issue: Reliability Assessment Processes and Procedures**

- Actively engage in Reliability Assessment Subcommittee peer-review process
- Proactive involvement in NERC committees and subgroups
- Increase involvement of stakeholders
- Increase RE/NERC staff coordination
- Provide sufficient staff support for comprehensive studies

- Ensure flexibility related to the type of data being requested by NERC
- Rely less on Subregions and ISO/RTOs for performing reliability self-assessments and modeling
- Continue to support improvements to Reliability Assessment Guidebook

**Issue: Stakeholder/Member Involvement**

- Actively engage NERC in Regional coordination meetings
- Increase involvement of members
- Promote contributions by Regional subject matter experts
- Ensure that market confidential data does not inhibit comprehensive and complete assessment of reliability
- Increase the involvement of stakeholders, including subgroup membership in assessments
- Engage in more interconnection-wide transmission planning studies

**Issue: Overall Quality and Timeliness**

- Improve the quality of data, especially in areas served by organized markets
- Ensure that market rules do not decrease ability for on-time submissions
- Provide sufficient RE staff resources and improve data collection processes for more timely submissions
- Minimize the amount of data corrections and updates
- Commitment to completeness and well-documented self-assessments

**V. REGIONAL ENTITY PERFORMANCE OF OTHER DELEGATED FUNCTIONS: TRAINING, EDUCATION, AND PERSONNEL CERTIFICATION; RELIABILITY READINESS EVALUATION; AND SITUATION AWARENESS AND INFRASTRUCTURE SECURITY**

The primary focus of the previous sections of Attachment 3 is on the Regional Entities' performance of their delegated functions in the areas of: Regional Reliability Standards Development; Organization Registration and Compliance Monitoring and Enforcement; and Reliability Assessment and Performance Analysis. These are the ERO functions that are expressly identified in §215 of the Federal Power Act. The Commission has also approved the performance by the ERO of other functions as "statutory functions" in support of the ERO mission, specifically: (1) Training, Education, and Personnel Certification; (2) Reliability Readiness Evaluation and Assessment (now discontinued); and (3) Situation Awareness. The Regional Entities also have programs to carry out delegated responsibilities with respect to these additional ERO functions. NERC notes that the scope of delegated functions performed by Regional Entities in the area of Training, Education, and Personnel Certification is somewhat limited, as the System Operator Certification and Continuing Education Provider Certification programs are largely carried out by NERC on a North American-wide basis.

In the template that NERC provided the Regional Entities to use in preparing their individual Statements of Activities, Achievements, and Effectiveness for this three-year



performance assessment report, NERC specified that each Regional Entity should describe its activities and achievements in each of the delegated function program areas since January 1, 2007; assess its effectiveness in each function over this time period; and identify any recommendations for improvement in the Regional Entity's own performance. These descriptions and analyses were to cover Training, Education, and Personnel Certification; Reliability Readiness Evaluation (the Regional Entity's activities and effectiveness during the period the program was being conducted); and Situation Awareness, as well as Reliability Standards, Compliance, and Reliability Assessment. NERC also requested that each Regional Entity provide a discussion of its activities and achievements, effectiveness, and plans for improvement, in the indirect program area of Budgeting. Each of the Regional Entities prepared a Statement of Activities, Achievements, and Effectiveness in accordance with the template, including the specified discussion with respect to the delegated functions of Training, Education, and Personnel Certification; Reliability Readiness Evaluation; and Situation Awareness; as well as for Budgeting. These discussions are provided in the individual Regional Entity Statements of Activities, Achievements, and Effectiveness in **Attachments 4A through 4H** of this report.

NERC has reviewed the individual Regional Entities' discussions of their activities and effectiveness in Training, Education and Personnel Certification; Reliability Readiness Evaluation; Situation Awareness; and Budgeting, including the Regional Entities' plans for improvement in these areas (other than for Reliability Readiness Evaluation, for which plans for improvement were not applicable), as presented in **Attachments 4A through 4H**. NERC believes these presentations provide fair and accurate descriptions and assessments of each Regional Entity's performance in these areas. NERC notes that, particularly in the Budgeting Area, the Regional Entities have provided a number of comments concerning, and recommendations for improvement in, the overall business planning and budgeting process, and these comments and recommendations are addressed in detail in **Attachment 2** of this report.<sup>8</sup>

In addition, NERC notes that although the numbers of respondents answering the questions with respect to some of the individual Regional Entities were perhaps too few to draw conclusions, stakeholder responses to questions in the stakeholder survey with respect to Training, Education, and Personnel Certification and Situation Awareness (including Critical Infrastructure Protection) were generally favorable (*i.e.*, generally in response categories 1, 2 or 3 — Fully Agree, Somewhat Agree, and Neutral); and did not indicate any significant areas of stakeholder dissatisfaction with respect to Regional Entity performance of any of these delegated functions. (See the compilations of responses to Question nos. 37–39, 45–47, and 49 in **Attachment 5**.)

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<sup>8</sup> To be clear, NERC's conclusion does not encompass WECC's performance of the Reliability Coordinator registered function, which is included in WECC's Situation Awareness Program and is treated as a statutory function for purposes of being funded through the statutory assessment mechanism. Pursuant to an agreement between NERC and WECC, NERC acts as the Compliance Enforcement Authority for the WECC Reliability Coordinator function, with the responsibility to monitor and enforce WECC's compliance with the requirements of reliability standards applicable to the Reliability Coordinator function.

## VI. TOPICS FROM APRIL 19, 2007 COMMISSION ORDER

In its Order issued April 19, 2007, in which it initially approved NERC's delegation agreements with the eight Regional Entities, the Commission directed NERC to address two topics, concerning (i) the SPP RE governance structure and independence from the SPP RTO, and (ii) the stakeholder voting structure of the WECC standards development procedure, in its initial three-year performance report.<sup>9</sup> Because discussion of these two topics does not fit neatly into the organization of NERC's evaluation of the individual Regional Entities, NERC is addressing these two topics in this separate section.

### A. SPP RE Governance Structure and Independence

In PP 401–402 of the *Delegation Agreement Order*, the Commission stated:

401. SPP represents that the SPP Regional Entity governance structure satisfies the requirements of Governance Criterion 4, *i.e.*, that the SPP Regional Entity will have established rules that assure balance in its decision-making committees and subordinate organizational structures and assure no two industry sectors can control any action and no one industry sector can veto any action. However, it is unclear whether SPP's quorum and voting requirements will allow for this balance. Specifically, SPP Bylaw, section 3.8 provides that a quorum for a meeting of the markets and operations committee or the members committee will be those members present. Section 3.9, moreover, establishes only two voting sectors: the transmission owning members sector and the transmission using members sector.

402. While we acknowledge that these protocols may be sufficient to meet the minimum requirements of our standards, we intend to closely monitor the activities and workings of the SPP committees and subordinate structures and to provide additional guidance and directives, as may be necessary. We also expect the ERO to address the effectiveness of these provisions and identify any related concerns and recommendations in the ERO's first performance assessment, which must include an analysis of Regional Entity effectiveness. [footnote omitted]

Ordering paragraph (D) of the *Delegation Agreements Order* stated that the three-year performance assessment report should address "the effectiveness of the SPP bylaws in ensuring an adequate separation of functions as between the SPP RTO and the SPP Regional Entity trustees."

While the cited SPP, Inc. Bylaws provisions specifically, and the SPP RE governance structure and independence from the SPP RTO generally, were legitimate subjects for monitoring and further review at the time of the *Delegation Agreements Order* (particularly in light of the corporate relationship between the SPP RTO and SPP RE), a number of developments and analyses since that time have substantially mitigated any concerns in this area.

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<sup>9</sup> *Delegation Agreements Order*, at PP 401–402 and 474–475.

First, the SPP, Inc. Bylaws (which are part of Exhibit B to the NERC-SPP delegation agreement) have subsequently been amended in numerous respects, including a set of amendments that has been approved by the NERC Board of Trustees and is presently before the Commission.<sup>10</sup> As approved by the NERC board, amended §3.8 and §3.9 of the SPP, Inc. Bylaws would read as follows:

### **3.8 Quorum**

The quorum for a meeting of the Markets and Operations Policy Committee or the membership shall be those Members present. The quorum for any other Organizational Group or task force shall be one-half of the representatives thereof, but not less than three representatives; provided, that a lesser number may adjourn the meeting to a later time. The quorum for a meeting must be established and maintained throughout the meeting in order for the Organizational Group(s) to take any binding actions(s). Notwithstanding the above, any actions taken before a quorum is lost are considered valid and binding. A proxy will serve to meet the quorum requirements as described in Section 3.2 *proxy* of these Bylaws.

### **3.9 Voting**

#### **3.9.1 Markets and Operations Policy Committee and Membership**

Upon joining, Members shall be assigned to one of two Membership sectors for the sole purpose of voting on matters before the Markets and Operations Policy Committee or the Membership: Transmission Owning Members, or Transmission Using Members. Each sector votes separately with the result for that sector being a percent of approving votes to the total number of Members voting. An action is approved if the average of these two percentages is at least sixty-six percent. If no Members are present within a sector, the single present sector-voting ratio will determine approval. Unless otherwise stated in these Bylaws, the Markets and Operations Policy Committee or the Membership may determine to vote on an issue by email. The outcome of any email vote must be recorded in the minutes for the group.

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<sup>10</sup> See *Petition of the North American Electric Reliability Corporation for Approval of Proposed Revisions to the Bylaws of Southwest Power Pool, Inc.*, filed May 21, 2009 and presently pending before the Commission in Docket No. RR09-4-000. NERC and SPP recognize that those proposed SPP, Inc. Bylaws amendments relating to SPP's Regional Entity responsibilities must be approved by the Commission as Regional Entity rules before becoming effective. See *Order on Rehearing*, 120 FERC ¶61,260 (2007), at PP 16-20.

### 3.9.2 Organizational Groups and Task Forces

Each representative of an Organizational Group or Task Force shall have one vote. A simple majority of participants present or represented by proxy and voting shall be required for approval of an action for all other Organizational Groups and Task Force action(s). Unless otherwise stated in these Bylaws, an Organizational Group or Task Force may determine to vote on an issue by email. The outcome of any email vote must be recorded in the minutes for the group.

If an Organizational Group is acting as a Standards Development Team as defined in Section 9.5 *Regional Reliability Standards Process* of these Bylaws, it will vote in accordance with the SPP Standards Development Process as approved by FERC.

Section 9.5 of the SPP, Inc. Bylaws (included in §9.0, Regional Entity Function), states that:

When an SPP working group or task force is considering an SPP Regional Reliability Standard, it will be designated the Standards Development Team (SDT) for that Standard in accordance with the SPP Regional Entity Standards Development Process Manual. For purposes of the SDT, participation and voting will be open to any interested party in accordance with the Standards Development Process and without regard to membership status in SPP.

Under the SPP RE Standards Development Process (which is included in Exhibit C to the NERC-SPP delegation agreement), the Registered Ballot Body has five voting segments: Transmission, Generation, Marketer/Broker, Distribution/Load Serving Entity, and End User and Public Interest. Further, membership in SPP is not a requirement for any participation in the SPP RE standards development process, including registration in the Registered Ballot Body and voting on proposed Regional standards.

Second, in a subsequent order issued December 19, 2008, in which the Commission, among other things, approved proposed amendments to the SPP, Inc. Bylaws, the Commission directed NERC and SPP RE to submit a further compliance filing addressing lingering concerns that “the SPP Markets and Operation Committee and SPP Board of Directors/Members Committee have the opportunity to significantly delay, if not terminate, a draft Regional Reliability Standard after the SPP Regional Entity Ballot Body has affirmatively voted on the standard.”<sup>11</sup> NERC and SPP RE addressed this directive in a February 17, 2009 compliance filing, providing a detailed discussion demonstrating that the concerns expressed by the Commission were not well founded.<sup>12</sup> The compliance filing pointed out that pursuant to the SPP RE Standards Development Procedure Manual, the roles of the SPP Markets and Operations Policy Committee and of the SPP, Inc. Board of Directors and Members in the standards

<sup>11</sup> *Order Accepting Compliance Filings, Subject to Conditions*, 125 FERC ¶61,330 (2008) (December 19, 2008 Order), at PP 108–110.

<sup>12</sup> *Compliance Filing of the North American Electric Reliability Corporation*, filed February 17, 2009, in Docket Nos. RR06-01-021 *et al.*, at pages 23–27.

development process are advisory only; and that the SPP RE Trustees have the sole authority to approve a standard developed by a standard drafting team for submission to NERC, including the authority to submit a proposed standard to NERC for approval even though the SPP Market and Operations Policy Committee, the SPP, Inc. Board and/or the SPP, Inc. Members' Committee has issued a negative report, or conducted a negative advisory vote, on the standard.

On June 1, 2009, the Commission issued an Order on the February 17, 2009 compliance filing, in which the Commission summarized NERC's and SPP RE's response to PP 108–110 of the December 19, 2008 Order, but stated, “At this time, we will not rule on the adequacy of NERC's and SPP's response to the December 19 Order. Instead, we preserve the right to address this matter in the proceeding addressing NERC's first performance assessment.”<sup>13</sup> NERC believes the discussion in the February 17, 2009 is responsive to the topic of SPP RE governance structure and independence from the SPP RTO raised in the *Delegation Agreements Order*, as well as to the specific directive of PP 108–110 of the December 19, 2008 Order. Accordingly, NERC asks the Commission to consider the discussion at pages 23–27 of the February 17, 2009 compliance filing as part of NERC's response to PP 401–402 and ordering paragraph (D) of the *Delegation Agreements Order*.

Third, during 2008 the Commission conducted an audit of SPP, with a focus on (among other topics) the sufficiency of separation between SPP's RTO functions and its Regional Entity functions. The Commission's audit report included a number of findings and recommendations on this topic, including:

- SPP, Inc. has not had a “strong” separation between its RTO and Regional entity functions as required by Commission orders
  - RTO management had supervisory control over Regional Entity employees, including influence over the hiring and compensation of those employees.
  - RTO employees had influence over NERC compliance monitoring and enforcement policies.
  - RTO management had the ability to influence the Regional Entity's expenditures.
  - RTO employees have received confidential Regional Entity compliance information.
- SPP RE trustees' oversight of the Regional Entity functions could be improved to prevent conflicts of interest and to further ensure the Regional Entity's independence.

To ensure SPP RE's independence and adequate separation from the SPP RTO functions, Commission audit staff made a number of recommendations that SPP has implemented, including hiring of a full-time Regional Entity General Manager to oversee all delegated functions of the SPP RE and serve as its primary representative to NERC; elimination of all reporting relationships between SPP RE employees and RTO employees; and a process requiring review and approval by the SPP RE General Manager of all time charged by SPP shared staff employees to the Regional Entity before the Regional Entity is required to reimburse SPP for

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<sup>13</sup> *Order on Compliance Filing*, 127 FERC ¶ 61,209 (2009), at PP 20–26.

these charges; and giving the SPP RE General Manager sole authority to approve withdrawals from the SPP RE bank account.

In its Order addressing the staff audit report, the Commission found that there will be an appropriate separation as between SPP's RTO and Regional Entity functions, subject to the following actions, among others: (i) the retention, by SPP, of a full-time Regional Entity manager to oversee all delegated functions of the Regional Entity and to serve as SPP RE's primary representative to NERC; (ii) authorization, on the part of the SPP RE managers and trustees, to approve unbudgeted expenses; (iii) authorization, on the part of the SPP RE manager, to authorize withdrawals from the SPP RE bank account, consistent with the SPP RE budget; and (iv) authorization, on the part of the SPP RE, to account for funds available to the Regional Entity and to address discrepancies resulting from an audit, bank account reconciliation, or internal reviews of the Regional Entity's segregated funds.<sup>14</sup> The amended SPP, Inc. Bylaws that were recently approved by the NERC board and are now before the Commission for approval expressly provided for the SPP RE General Manager position and the General Manager's reporting relationship (i.e., to the SPP RE Board of Trustees), authority, and responsibilities.

Fourth, through a series of actions that have been reviewed by the Commission, including amendments to Exhibit E to the NERC-SPP delegation agreement and revisions to SPP finance and accounting processes and procedures, SPP has taken actions to ensure that SPP RE revenues, expenditures, and funds are properly recorded and accounted for (in accordance with the NERC System of Accounts) and are appropriately segregated from the revenues, expenditures, and funds of SPP, Inc. The current version of the SPP RE delegation agreement, including a revised Exhibit E, was accepted by the Commission in the December 19, 2008 Order and in an Order on Rehearing issued March 25, 2009.<sup>15</sup> In an Order issued June 29, 2009 concerning a filing made by NERC on April 1, 2009, the Commission accepted the demonstration submitted by NERC and SPP RE in the April 1, 2009 filing of the processes and procedures by which SPP shared staff costs and indirect costs are allocated to SPP RE statutory activities and approved for payment. The Commission stated:

The Commission is satisfied with SPP's explanation of the processes by which the shared employee costs and indirect costs are allocated to the SPP-RE statutory activities. The Commission is also satisfied with the SPP-RE General Manager approval process of the actual hours shared employees work on SPP-RE business.<sup>16</sup>

Additionally, in a letter order issued June 30, 2009, in Docket RR07-16-006, the Commission accepted an April 6, 2009 compliance filing of NERC in which it was demonstrated that SPP RE

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<sup>14</sup> See *Southwest Power Pool*, 126 FERC ¶ 61,045 (2009).

<sup>15</sup> December 19, 2008 Order at P 1 and ordering paragraph (A); *Order on Rehearing*, 126 FERC ¶ 61,270 (2009), P 16–18.

<sup>16</sup> *Order Conditionally Accepting Compliance Filing*, 127 FERC ¶ 61,307 (2009), at P 22.

had performed a reconciliation of its system of accounts with the NERC System of Accounts in accordance with §8(e) of the NERC-SPP delegation agreement.

**B. Voting Structure for WECC Standards Development Procedure**

In PP 474-475 of the *Delegation Agreements Order*, the Commission stated:

474. NERC, in its transmittal letter, expresses concern that the multiple stakeholder classes typical in other Regional Entities are, in WECC, combined into two broad classes and that, as such, it is unclear whether the WECC voting model, at the committee and subordinate structure level, satisfies the FPA section 215 requirement regarding the need for a balance of stakeholder interests. However, we agree with WECC that its choice of transmission provider and transmission customer classes for committee voting can be considered fair and balanced under the circumstances presented here. In fact, both classes represent a sufficiently broad range of participants. In addition, both classes must approve a recommendation for it to pass and both classes have an equal ability to block a recommendation.

475. While we acknowledge NERC's concern regarding the potential for interest groups within each class to control the vote of the class, in theory, we will not withhold approval on this basis alone given the overall acceptability of WECC's governance structure, as discussed in connection with its Exhibit B submittals; and the transitional circumstances presented by WECC's filing. We do not foreclose the possibility of revisiting this issue, if necessary, in the future. Further, we expect NERC to address the effectiveness of WECC's stakeholder voting structure in the ERO performance assessment.

Ordering paragraph (D) of the *Delegation Agreements Order* stated that the three-year performance assessment report should address "the effectiveness of WECC's stakeholder voting structure as it relates to the standards development process."

NERC notes that the directive in P 475 and ordering paragraph (D) of the *Delegation Agreement Order* was triggered by concerns raised by NERC concerning the stakeholder voting structure for the WECC standards development process. As with the SPP RE governance structure issue, subsequent developments and experience have served to substantially mitigate NERC's original concerns.

Under the currently-effective "Process for Developing and Approving WECC Standards" (Exhibit C to the NERC-WECC delegation agreement), which has been amended subsequent to the *Delegation Agreement Order* in respects relevant to these concerns, development of and voting on WECC Regional standards is conducted by the applicable WECC Standing Committee, subject to ultimate approval of the WECC Board. The WECC standards development process further provides that decision-making and voting is to be conducted in accordance with the WECC Bylaws (Exhibit B to the NERC-WECC delegation agreement), in particular §8.5 (Procedures for Committee Decision-Making) and §8.6 (Procedures for

Developing and Voting on Reliability Standards). The WECC Bylaws have also been amended subsequent to the *Delegation Agreement Order* in respects relevant to these concerns, including the addition of current §8.6 as a new provision. Section 8.6.1 of the WECC Bylaws specifies that all WECC Members and “Participating Stakeholders” may participate in standards development activities including voting. A “Participating Stakeholder,” defined in §3.21 of the WECC Bylaws, is “Any person or entity that is not a WECC Member, but is an interested stakeholder and has applied and been granted, pursuant to Section 8.6.2, the participation and voting rights set forth in Section 8.6.1.” Section 8.6.2 specifies the process for obtaining “Participating Stakeholder” status. Section 8.5.5 of the WECC Bylaws provides for three classes of membership for the purposes of voting: (i) Transmission Provider Members or Participating Stakeholders, (ii) Transmission Customer Members or Participating Stakeholders, and (iii) States and Provincial Members. The specific voting and approval requirements are specified in §8.5.5.2 of the WECC Bylaws:

Except as provided in Section 4.5.2, each committee member and Participating Stakeholder (if any) will have one vote. In order for a recommendation to be made to the Board, such recommendations must receive a simple majority of both: 1) committee members and Participating Stakeholders (if any) present and voting for the Transmission Provider Class; and 2) committee Members and Participating Stakeholders (if any) present and voting from the Transmission Customer Class.

In the stakeholder survey conducted as part of preparing this three-year assessment report, Question nine was: “Standards development process has been open and inclusive and provides adequate opportunities for interested stakeholders to provide comments.” A total of 47 respondents answered this question with respect to the WECC standards development process. Of those respondents, 26 (55 percent) responded “fully agree” and 32 (68 percent) responded either “fully agree” or “somewhat agree” (i.e., response categories 1 or 2). Only six of the respondents (13 percent) responded “somewhat disagree” or “fully disagree” (response categories 4 or 5). (See **Attachment 5**.) Further, there were no individual stakeholder comments (positive or negative) in the survey responses concerning the stakeholder voting structure in the WECC standards development process.<sup>17</sup>

WECC has submitted for NERC board approval a total of 16 Regional standards that have been successfully developed and approved through the WECC standards development process. This far exceeds the number of Regional standards developed and submitted for NERC board approval by any other Regional Entity. Nine of these WECC Regional standards have been approved by the NERC board, filed with the Commission for approval, and approved by the

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<sup>17</sup> The few individual stakeholder comments that were received on the WECC standards development process focused primarily on the difficulty smaller entities experienced in being able to devote resources to participate in standards drafting teams and in reviewing and commenting on drafts of proposed Regional standards. As discussed at greater length in **Attachment 2**, similar stakeholder comments were received concerning the standards development processes of NERC and other Regional Entities.



Commission. WECC is the only Regional Entity that has developed any Regional standards through to approval by the Commission. Thus, experience to date has shown that the WECC processes for developing and voting on proposed Regional standards, including the stakeholder voting structure, have not impeded development and approval of WECC Regional standards. WECC's success in producing 16 Regional standards that have been approved at the Regional Entity level, nine of which have been approved by the NERC board and the Commission, demonstrates the effectiveness of WECC's standards development process including its stakeholder voting structure. Moreover, the WECC stakeholder voting structure was not identified as a source of stakeholder concern in NERC's survey.

**FEDERAL ENERGY REGULATORY COMMISSION  
DOCKET NO. RR09-\_\_\_**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

**ATTACHMENT 4**

**TO**

**THREE-YEAR  
ELECTRIC RELIABILITY ORGANIZATION  
PERFORMANCE ASSESSMENT REPORT**

**JOINT REGIONAL ENTITY SELF ASSESSMENT**

**And**

**REGIONAL ENTITY STATEMENTS OF  
ACTIVITIES AND ACHIEVEMENTS**

**JULY 20, 2009**

# **Joint Regional Entity Self-Assessment**

**July 20, 2009**

# Joint Regional Entity Self-Assessment

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# Introduction

## Purpose

In its order approving the North American Electric Reliability Corporation (“NERC”) as the Electric Reliability Organization (“ERO”), the Federal Energy Regulatory Commission (“FERC”) directed NERC to conduct an assessment of its performance after the initial three years of operation as the ERO, and to include an assessment of the Regional Entities.<sup>1</sup> This report provides a joint review of key issues and consensus recommendations on behalf of the eight Regional Entities<sup>2</sup> and supplements the accompanying individual Regional Entity statements of activities and achievements.

The purpose of this report is to:

- Provide the Regional Entity assessments, based on their experience over the past three years, of the effectiveness of the self-regulatory framework and delegation model.
- Describe the results to date, including achievements, key issues and challenges, and opportunities to improve the Regional Entities’ execution of delegated functions.
- Provide the Regional Entity assessment of NERC’s performance as the ERO, as required by FERC.<sup>3</sup>
- Respond to the broad issues identified in the NERC assessment of the Regional Entities (Region-specific issues are addressed in the statements of activities and achievements of each Regional Entity.)
- Respond to the broad concerns identified by reliability stakeholders through their inputs to the industry survey<sup>4</sup> (Region-specific issues are addressed within each Regional Entity’s statements of activities and achievements).
- Present Regional Entity recommendations for improvements.

## Report Organization

The report begins with a review of the self-regulatory framework and delegation model, from the viewpoint of the Regional Entities. The report then assesses the general performance of the Regional Entities in executing their responsibilities under their delegation agreements and addresses such issues as governance, independence, and non-statutory functions. Included is a summary of the key milestones achieved in the transformation of the Regional Entities and significant challenges encountered along the way.

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<sup>1</sup> *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 187-188, *order on reh’g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

<sup>2</sup> The Regional Entities are: Florida Reliability Coordinating Council (“FRCC”), Midwest Reliability Organization (“MRO”), Northeast Power Coordinating Council (“NPCC”), ReliabilityFirst Corporation (“RFC”), SERC Reliability Corporation (“SERC”), Southwest Power Pool Regional Entity (“SPP RE”), Texas Regional Entity (“TRE”), and Western Electricity Coordinating Council (“WECC”).

<sup>3</sup> See Order No. 672 at P 188.

<sup>4</sup> See Industry Survey. As with the April 27 posting, the tabulated results to the survey questions will be Attachment 5 to the 3-Year Performance Report.

The remainder of the report then addresses each of the delegated functional areas and identifies key issues and opportunities for improvement. An executive summary of achievements and recommendations for improvement is provided in the next section, for ease of reference.

# Major Achievements and Recommendations for Improvement

## Summary of Achievements

Although this report is focused on identifying recommendations for improvement, it is important to first recognize the ERO and Regional Entities have effectively executed their responsibilities as delegated by FERC in the United States and by provincial authorities in Canada. In particular, the Regional Entities have met the requirements of Order 672, Order 693,<sup>5</sup> FERC's order approving the delegation agreements,<sup>6</sup> memoranda of understanding with provincial authorities, and other applicable orders and requirements. In addition, the Regional Entities have adhered to the ERO rules of procedure and the terms of their delegation agreements. The Regional Entities also believe that NERC has, without exception, met its obligations as the ERO.

The Regional Entities concur with NERC's assessment that it is too early to measure improvements in the reliability performance of the bulk power system. The Regional Entities further agree that the major successes in the first three years of the ERO are primarily related to the implementation of the necessary structures and processes to ensure reliability going forward. Several significant accomplishments include:

1. The Regional Entities have registered 1,839<sup>7</sup> owners, operators, and users of the bulk power system to provide clear notice to these entities that they are subject to mandatory reliability standards. This number is at least six times greater than the number of entities that previously followed the voluntary operating and planning policies, standards, criteria and guides published by NERC and includes a significant number of entities in the United States that were not previously within FERC jurisdiction.
2. The Regional Entities have completed the processing of 5,039 compliance violations that were self-reported prior to the start of mandatory enforcement of reliability standards on June 18, 2007. With independent verification by the Regional Entities all but 48 of the mitigation plans to cure these pre-existing violations have been completed, and the risk to the reliability of the bulk power system has, to a significant degree, been reduced.
3. Since June 18, 2007, when the standards became mandatory, the Regional Entities have conducted nearly 600 audits of registered bulk power system owners, operators, and users to verify compliance with reliability standards. Regional Entities have reported over 600 possible violations from these audits. This independent verification is in addition to thousands of periodic self-certifications of compliance to specific standards that have been provided by registered entities.
4. Since the inception of mandatory standards, registered entities have self-reported or self-certified approximately 1,400<sup>8</sup> possible violations of standards, most of which were timely corrected. This culture of self-reporting and mitigation is a direct result of work by NERC and the Regional Entities to promote a strong compliance culture among bulk power system owners, operators, and users.

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<sup>5</sup> See *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242, order on reh'g, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

<sup>6</sup> See *North American Electric Reliability Council, et al.*, 119 FERC ¶ 61,060 (2007).

<sup>7</sup> Number of unique NERC Compliance Registry entries posted on the NERC website effective June 23, 2009.

<sup>8</sup> Since June 18, 2007 slightly more than half of the possible 2,764 violations reported to NERC by the Regions have been self-reported by registered entities.

5. NERC has engaged more than 300 industry experts in drafting reliability standards through an open, balanced, and inclusive standards development process. In addition to the 83 reliability standards originally approved by FERC in Order No. 693,<sup>9</sup> NERC has since received approval of 12 new standards and dozens of revised standards. Additionally, each Regional Entity has established a FERC-approved process for developing any needed Regional reliability standards, and 8 Regional reliability standards have received FERC approval.
6. NERC and the eight Regional Entities have adopted a uniform Compliance Monitoring and Enforcement Program, including hearing procedures, and a set of Sanction Guidelines. These procedures provide assurance of clearly defined protocols for the discovery, prosecution, and appeal of alleged violations of reliability standards. To date, FERC has accepted 61 Notices of Penalty addressing 164 enforceable violations that were processed and filed using these procedures.
7. NERC has established strong oversight through establishment of an independent board and adoption of a set of Rules of Procedure, both of which have been approved by FERC.<sup>10</sup> Each Regional Entity has established a FERC-approved governance using a balanced stakeholder board, a hybrid board including independent directors, or a wholly independent board. Each Regional Entity has further established necessary procedures and safeguards to execute its delegated functions effectively and in the public interest.
8. NERC and the Regional Entities have established arrangements for the performance of similar delegated functions in the various provinces of Canada (WECC, MRO, and NPCC perform these functions.)
9. NERC and the Regional Entities have performed over 100 event analyses for the purpose of determining lessons learned and opportunity for reliability improvements and issued 25 alerts addressing reliability issues.
10. NERC and the Regional Entities have provided extensive outreach and communication with bulk power system owners, operators, and users regarding the reliability standards and the compliance program.

The individual Regional Entity statements of activities and achievements provide further detail on the major accomplishments of each Region in the first years of operation under the delegation agreements.

### **Summary of Improvements Needed and Recommendations**

The following is a summary of key areas for improvement with specific recommendations of the Regional Entities.

1. The self-regulatory model adopted by Congress, which combines significant industry input with appropriate regulatory oversight, is the best model for ensuring the reliability of the bulk power system, is working effectively, and therefore should remain in effect.
2. The existing international reliability assurance structure, utilizing the NERC independent board to provide vision and direction, the ERO to provide leadership, guidance and

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<sup>9</sup> *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242, *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

<sup>10</sup> *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062, *order on reh'g and compliance*, 117 FERC ¶ 61,126 (2006).



oversight, and the Regional Entities to implement delegated authorities, is the best model for ensuring the reliability of the bulk power system, is working effectively, and therefore should remain in effect.

3. NERC and the Regional Entities should continue to strive toward mutual openness and cooperation, with strong conviction and singularity of purpose, to promote mutual success of their respective responsibilities in ensuring the reliability of the bulk power system.
4. To improve the delegation process, NERC and the Regional Entities should work together to update the delegation agreements, which are due for renewal in May 2010, to provide a clearer division of responsibilities and decisional authorities, both related to the performance of statutory functions and oversight of those functions, and to provide effective mechanisms to resolve routine differences.
5. The existing governance structures of the Regional Entities are working effectively — policy change regarding governance is unnecessary due to the existing safeguards that are in place.
6. With full conviction that conflicts of interest with statutory functions should not exist, Regional Entities recommend that the issue of whether a potential conflict of interest does exist should be resolved based on the facts on an individual basis with the affected Regional Entity, and that a change in policy is unnecessary to address the issue.
7. To ensure development of reliability standards that provide for an adequate level of reliability of the bulk power system:
  - a. NERC should on a priority basis finalize its performance requirements necessary for the development of the Regional fill-in-the-blank reliability standards so Regional Entities may expedite completion of any necessary Regional reliability standards; and
  - b. NERC should prioritize its reliability standards development activity and compliance review by focusing on those standards that are performance-based, rather than documentation-based, and that have the greatest potential to mitigate risk to reliability, and furthermore NERC should consider reformulating less critical standards into guides or technical references.
8. To provide a more efficient registration of bulk power system owners, operators, and users that focuses on material impacts to reliability:
  - a. NERC and the Regional Entities, in consultation with stakeholders, should review the registration criteria to determine if there should be a different threshold for materiality to the reliability of the bulk power system and to determine if compliance resources could be better prioritized by modifying the registration criteria; and
  - b. NERC should consider a more precise long-term solution of increasing the granularity of registration so that it focuses on the requirement level and includes registration by bulk power system facility, or classes of facilities.
9. To improve performance and build upon the initial successes of the Compliance Monitoring and Enforcement Program:
  - a. NERC should, in consultation with Regional Entities and using a deliberate change in management and feedback process, refine its implementation of

decentralized compliance monitoring and enforcement by providing clear standardized procedures, active controls, clearly articulated performance metrics, and checks or audits of performance to guide Regional Entity performance of delegated compliance functions;

- b. NERC and Regional Entities should operate together in a mutually supportive manner, with more transparent, clear, and frequent communications among the compliance authority staffs;
- c. NERC should not replicate the initial investigatory work performed by a Regional Entity when considering a reliability standards violation, as sometimes occurred in the initial start up period, but rather should establish clear, transparent metrics for review and acceptance of Regional Entity actions, except in unusual or problematic cases or where assistance is requested by the Regional Entity;
- d. NERC should communicate clear expectations to Regional Entity compliance audit and enforcement staffs and provide comprehensive training, even possibly to the extent of a compliance audit and enforcement “training academy,” to promote greater consistency in implementation and interpretation of standards;
- e. NERC and the Regional Entities should collaborate in the development of compliance information systems that provide seamless flow and processing of compliance information from registered entities, through the Regions, to NERC;
- f. Regional Entities are bound to apply the plain language of a standard when conducting compliance reviews rather than engage in extemporaneous interpretations of intent and, therefore, when expectations associated with reliability standards appear to exceed what is clearly identified in the approved standard, NERC should make all registered entities aware of such expectations;
- g. NERC and the Regional Entities should, through a single coordinated process, provide transparent information to help registered entities better understand compliance requirements and processes, while still protecting confidentiality rights and due process, by publicly sharing lessons learned, providing examples of what is necessary to demonstrate sufficient evidence of compliance, and identifying common mode failures that have led to past non-compliance;
- h. NERC and the Regional Entities should review compliance resource requirements to target resource additions to resolve key bottleneck areas in the processing of alleged violations, while simultaneously seeking greater efficiencies by prioritizing cases, increased automation, etc.;
- i. NERC and the Regional Entities should adopt risk-based approaches to prioritize compliance monitoring, particularly auditing, and enforcement activities and focus a greater share of resources on a smaller number of requirements that are most important to reliability;
- j. NERC and the Regional Entities should adopt procedures for the expedited processing of minor or document-related violations;
- k. For uncomplicated cases, such as those that have relatively low penalty amounts, NERC should establish baseline penalty amounts as a guide for each requirement violated, thereby reducing the disproportionate burden of effort in the Region and minimizing inconsistencies in determining penalties for minor violations with penalties on the order of a few thousand dollars;

- l. For more serious violations, NERC should have the expectation that penalties will vary from case to case based on the facts of the case and judgment of the Regional Entity staffs; although the penalties should be scaled to the seriousness of the violation and should consider all of the aggravating and mitigating factors;
  - m. The NERC Board of Trustees Compliance Committee should select unique cases with precedential value and issue their decision, either approving or remanding a case, to all Regional Entities (non-publicly) and regardless of whether the board develops a written opinion on a case, all decisions of the board, including remands, should be shared with all of the Regional Entities as a method of further delineating minimum expectations;
  - n. NERC should offer consultation upon request from the Regional Entity for assistance in determining a violation, or penalties and sanctions for a complex case, or for guidance in developing the record for a case, but should otherwise allow Regional Entities to independently develop cases for NERC approval.
10. Regional Entities recommend that FERC should indicate that it will provide the forum for determining legal challenges of jurisdiction between federal agencies and not expect that such matters should be heard by a Regional Entity hearing body or a NERC appellate body.

# Summary of Existing Regional Entities

## Background on Delegation

A Regional Entity is an organization that has been delegated certain statutory functions of the ERO. The ERO and each Regional Entity consummate the delegation through the execution of a delegation agreement, which must be approved by the applicable government authority (*e.g.*, FERC in the United States.) By entering into such an agreement, the Regional Entity becomes subject to the jurisdiction of the applicable government authority(ies), the rules of procedure of the ERO, and any reliability standards applicable to the Regional Entities.

The scope of the delegation of authority to each Regional Entity encompasses three principal statutory functions: (i) development of Regional reliability standards, (ii) monitoring and enforcement of mandatory reliability standards, and (iii) reliability assessment. NERC has identified several additional functions that are necessarily implied in the role of an ERO, including training and education, event analysis, performance analysis, and critical infrastructure protection. The Regional Entities perform the three principal delegated functions and most have activities in the additional functions, in support of NERC's defined programs.

## Description of Existing Regional Entities

As shown in Figure 1, the existing eight Regional Entities provide full geographic coverage for the jurisdictional scope of NERC as the international ERO.

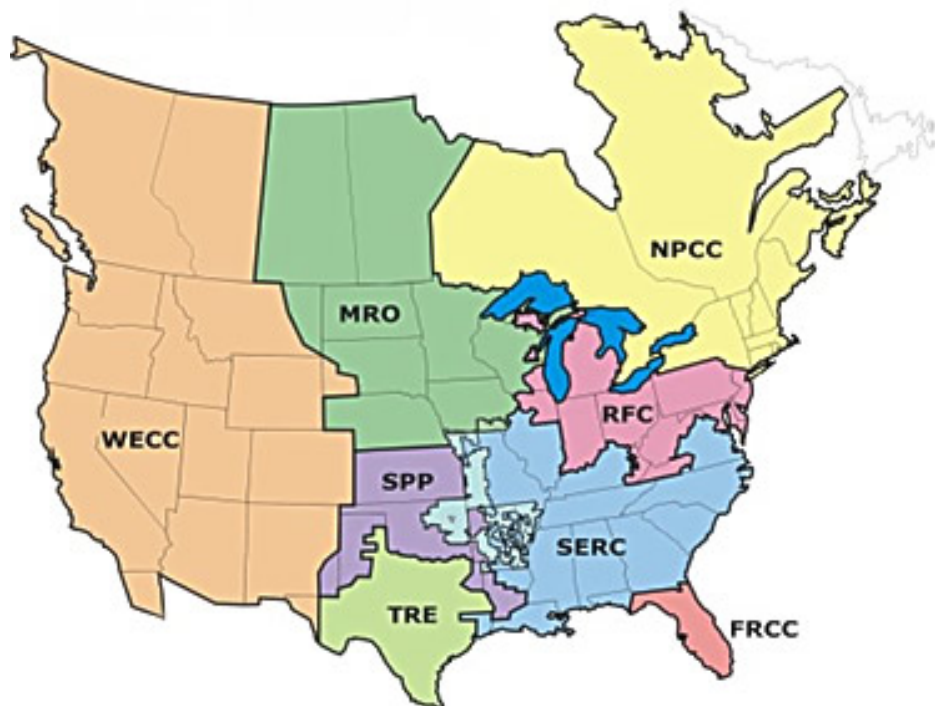


Figure 1 – Map of Regional Entities within NERC

Each Regional Entity previously existed as a voluntary, member-based Regional reliability council or organization. The origins of the Regional councils date back at least several decades, some as early as the early 1940's and most the late 1960's, when NERC was formed in response to the 1965 Northeast Blackout. The value of preserving aspects of the Regional councils while adapting to the new regime of mandatory reliability standards and compliance enforcement cannot be understated, as will be described later in this report.

Despite the long history of some of the Regional organizations, there has been a clear recognition that the Regional Entities carry substantially different responsibilities and authorities under the new reliability regime of delegated, government-approved authorities to monitor and enforce compliance with mandatory standards for the purpose of protecting the public interest in a reliable bulk power system. As briefly described below, each Regional Entity has in this initial three-year period of review taken definitive actions to successfully transform itself to meet these new obligations, including changes to governance, independence, procedures, and staffing:

- **Florida Reliability Coordinating Council (“FRCC”)** was formed in 1996. Its sole purpose is to ensure and enhance the reliability and adequacy of the bulk power system in Florida. Since becoming a Regional Entity, FRCC has made significant changes in its governance and organizational structure. FRCC amended its Bylaws to create two membership divisions — Regional Entity Division (statutory functions) and Member Services Division (non-statutory functions), added a new General Sector to its membership sectors, added new employees strictly dedicated to the compliance and standards functions, and made changes in its organizational reporting structure. All staff are independent of registered entities, and the organization is governed by a balanced stakeholder board. FRCC has also implemented internal controls in its accounting procedures to ensure there is no cross subsidization of funds between statutory and non-statutory activities.
- **Midwest Reliability Organization (“MRO”)** was formed from the former Mid-Continent Area Power Pool (“MAPP”) Regional council and a portion of Mid-America Interpool Network (“MAIN”) as a new corporation for the purpose of becoming a Regional Entity under the Energy Policy Act of 2005 and the Bilateral Principles. The Region spans eight states and two Canadian provinces. MRO is comprised of municipal utilities, cooperatives, investor-owned utilities, a federal power marketing agency, Canadian Crown Corporations, large and small end-users, and independent power producers. MRO is independent of all bulk power system owners, operators, and users, and has no shared employees with any third party. MRO performs only responsibilities delegated from the ERO and similar functions through arrangements with Saskatchewan and Manitoba. MRO has a balanced stakeholder board whereby no two sectors can control a vote and membership is at no cost. The Board has adopted procedures to ensure that they carry out their responsibilities in a non-discriminatory manner, free of conflicts.
- **Northeast Power Coordinating Council (“NPCC”)** was established as the voluntary, international Regional reliability organization for Northeastern North America in January 1966. NPCC began restructuring efforts in 2006 to establish a not-for-profit corporate structure governed by a balanced stakeholder board, using an eight-sector voting model, to meet expected requirements of the Energy Policy Act of 2005. An independent consultant Chairman presides over board activities. By late 2007, with FERC rulings that allowed for divisional separation within Regional entities, NPCC had evolved to include both Regional Entity and criteria services divisions. Because NPCC is an international Regional Entity with significant cross-border interdependencies affecting approximately

70 percent of the Canadian net energy for load, NPCC has developed memoranda of understanding or provincial government and/or regulatory agency agreements to provide clear delineation of the responsibilities for standards setting, compliance monitoring and enforcement, and reliability assessments within these very different reliability assurance structures.

- **ReliabilityFirst (“RFC”)** was formed from parts of the former East Central Area Reliability Council (“ECAR”), MAIN, and the Mid-Atlantic Area Council (“MAAC”) Regional reliability councils on January 1, 2006. The organization was specifically designed to address changes required by the Energy Policy Act of 2005 and to support the ERO in a self-regulating model by which the industry participants establish their own standards and independent Regional Entities determine compliance to those standards. The organization was modified from top to bottom compared to the legacy reliability councils it replaced, and exists only to serve as a FERC-approved Regional Entity performing only those functions delegated to it by NERC as the ERO. For example, all staff are independent of registered entities, the organization is now governed by a hybrid board of directors, which includes both independent and balanced industry sector directors, the corporate headquarters were moved, and the organization is now funded (through the ERO) by all load-serving entities in the footprint as opposed to members (membership is free.)
- **SERC Reliability Corporation (“SERC”)** was incorporated in April 2005, replacing the Regional reliability council previously in existence since 1969. The new organization was redesigned to meet Section 215 of the Federal Power Act and FERC criteria for delegating statutory authorities and responsibilities. SERC’s scope includes only statutory functions delegated by NERC. The organization does not perform any registered entity functions and has no business affiliations with any registered entities. SERC adopted new bylaws, approved by FERC in April 2007, that provide for a balanced stakeholder board with seven sectors. In June 2007, SERC relocated its headquarters to an unaffiliated office space in Charlotte, North Carolina. SERC has increased staffing from 13 payroll employees in January 2007 to 44 today and all staff are independent of registered entities. The organization is funded through the ERO. Membership is free and open to all jurisdictional owners, operators, and users in the Region, and end-use customers.
- **Southwest Power Pool Regional Entity (“SPP or SPP RE”)** has made fundamental governance and organizational changes necessary to carry out its delegated responsibilities. In response to the Energy Policy Act of 2005, SPP, Inc., created a new department to perform all compliance activities over SPP registered entities. SPP RE began engaging NERC to lead SPP, Inc. audits in 2007. In April 2007, FERC approved changes to the SPP, Inc. Bylaws creating three independent trustees to manage all SPP RE delegated activities. These trustees, initially elected in June 2007, are required to be independent of SPP, Inc. members and customers, and registered entities in the Region. In March 2009, SPP RE hired a General Manager, reporting directly to the three independent trustees, to oversee the execution of the Regional Entity strategic direction and direct the day-to-day operations, including all compliance and enforcement activities. The General Manager oversees only delegated statutory functions. All reporting relationships between SPP RE employees and SPP, Inc. employees have been terminated.

- **Texas Regional Entity (“Texas RE or TRE”)** was formed in late 2006, in response to the Energy Policy Act of 2005, as a functionally separate division of the Electric Reliability Council of Texas, Inc. (“ERCOT ISO”), for the purpose of enhancing and ensuring reliability of the bulk power system in the Region. TRE monitors and enforces compliance with NERC Reliability Standards, while also monitoring and reporting to the Public Utility Commission of Texas (“PUCT”) on compliance with the reliability-based ERCOT Protocols and Operating Guides. TRE made significant changes in its governance and organizational structure to separate all operations from ERCOT ISO to independently carry out its statutory functions. In 2007, the ERCOT Bylaws were revised to create the functionally separate TRE reporting directly to a hybrid board of directors. TRE has grown from a staff of nine employees in January 2007 to a current staff of 30. All TRE employees are required to be independent of any registered entity or ERCOT market participant. Texas RE has implemented policies, procedures, and internal controls to ensure its independence from owners, operators, and users of the bulk power system.
- **Western Electricity Coordinating Council (“WECC”)** is the successor to the Western Systems Coordinating Council (WSCC), which was formed in 1967. WECC was formed in April 2002 from the merger of the WSCC, the Southwest Regional Transmission Association, and the Western Regional Transmission Association. WECC’s geographic area is the Western Interconnection — an area encompassing all or part of 14 U.S. states, two Canadian provinces, and a portion of Baja California Norte, Mexico. WECC has 253 members divided into seven membership classes and is governed by an independent and balanced stakeholder board consisting of 32 directors. On February 7, 2006, in anticipation of Regional Entity authority, WECC filed revised Bylaws with the Federal Energy Regulatory Commission, to allocate representation on the WECC Board of Directors for Canadian and Mexican members based on net energy for load. WECC has substantially increased staffing to accommodate compliance and enforcement activities, and all compliance employees are independent of owners, operators, and users of the bulk power system. WECC maintains organizational separation between compliance and other statutory activities. In 1997, WECC implemented a Regional Reliability Coordination Plan and funded three Reliability Coordination Offices (RCOs) that contractually provided the ability for WECC to issue reliability directives to operating entities. In January 2009, WECC consolidated the RCOs from three to two, making the remaining two WECC-staffed RCOs more effective and efficient.

# Framework of Self-Regulation and Delegation

## Effectiveness of Self-Regulation

In the Energy Policy Act of 2005<sup>11</sup>, the United States Congress enacted sweeping changes to how regulatory oversight is provided to meet the public's interest in ensuring the reliability of the Nation's bulk power system. Among the most significant changes was to establish FERC as the United States government agency with the authority to approve mandatory reliability standards and to enforce compliance with those standards by owners, operators, and users of the bulk power system, subject to penalties of up to one million dollars per day, per violation.

With wisdom and foresight, Congress chose a self-regulatory model that allows FERC to certify an industry-based ERO and to delegate to the ERO the responsibility and authority to propose reliability standards for FERC approval, to enforce compliance with those standards, and to assess reliability performance. In Order No. 672,<sup>12</sup> FERC established its criteria for certifying the ERO and in July 2006 conditionally certified NERC as the ERO.<sup>13</sup>

Congress further allowed for the delegation of certain responsibilities and authorities from the ERO to Regional Entities. FERC codified the essential criteria for delegation to the Regional Entities in Part 39 of its regulations<sup>14</sup>, and in April 2007 conditionally approved delegation agreements between NERC and the existing eight Regional Entities.<sup>15</sup>

Congress chose a model that combines strong federal authority with industry self-regulation in lieu of other possible regulatory approaches. The first three years of experience have demonstrated this approach to be an effective fit for the unique characteristics of the North American bulk power system. The electric power system is unique in that it is physically interconnected across North America and every owner, operator, and user has a vested interest in the reliability of every other owner, operator, and user — the system is only as strong as the weakest link.

An interconnected, cross-border bulk power system requires an *international* ERO to manage reliability. Providing for an international, industry-based ERO, rather than a government-only form of regulation, enables a single organization to develop a common set of North American bulk power system reliability standards and enforce compliance with those standards uniformly across international and provincial boundaries. To complete this framework, in the time since its certification as the ERO, NERC has worked successfully with Canadian federal and provincial governments to establish the cross-jurisdictional framework necessary to enforce standards across all of North America.

In addition to its interconnectedness, the bulk power system in North America is one of the most complex engineering feats in the history of humankind. Knowledge of how that system works is principally vested with the engineers and operators who plan and operate the system on a daily

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<sup>11</sup> Energy Policy Act, Pub. L. No. 109-58, § 1289, 119 Stat. 594 (2005).

<sup>12</sup> See Footnote 1.

<sup>13</sup> *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062, *order on reh'g and compliance*, 117 FERC ¶ 61,126 (2006), *order on compliance*, 118 FERC ¶ 61,030, *order on clarification and reh'g*, 119 FERC ¶ 61,046 (2007).

<sup>14</sup> 18 C.F.R. § 39.1, *et seq.*, (2008).

<sup>15</sup> See *North American Electric Reliability Council, et al.*, 119 FERC ¶ 61,060 (2007).



basis. In adopting the self-regulatory model, Congress recognized the unique expertise available only to experienced practitioners was necessary to ensure enforceable requirements for planning and operation of the bulk power system, respect the laws of physics, and consider the practical risks, technical challenges, and benefits of operating interconnected electric systems. The self-regulatory model complements FERC's strong regulatory authority with the industry expertise necessary to develop effective reliability standards and perform other reliability improvement functions envisioned by Congress. Moreover, the expert volunteers are typically provided at no cost to the ERO, allowing the ERO and the Regional Entities to be more cost-effective.

Finally, the self-regulatory model has demonstrated in the first three years that it serves to actively engage bulk power system owners, operators, and users with vested interests in reliability through active development of the reliability organizational structures and rules, and constructively improving reliability, rather than assuming a passive approach and waiting to be regulated. In the reliability context, the public interest is best served by an industry that is willfully and actively engaged in improving and ensuring reliability rather than one that is simply expected to follow minimum requirements that have been imposed upon it. It is this active industry engagement that presents the best opportunity for sustainable reliability excellence over the long-term.

For the reasons outlined above, the Regional Entities strongly endorse the self-regulatory model by which industry participants develop their own standards and independent ERO and Regional Entity staffs determine compliance to those standards, as designed by Congress. The Regional Entities believe the model is working effectively today, because it provides the necessary controls and checkpoints offered by strong regulatory government authorities (FERC in the United States and the provinces in Canada) overseeing an international, North American reliability organization assisted by eight Regional Entities. This approach of strong central controls through rules of procedure, delegation agreements, a uniform Compliance Monitoring and Enforcement Program and auditing, as well as final approvals at NERC before the filing of reliability standards and compliance actions, is a sustainable long-term model for the ERO.

The self-regulatory model has proven to be effective as designed, notwithstanding the opportunities to improve performance that are outlined in this report and the NERC self-assessment. The model works because it combines the best of legacy reliability infrastructures, expertise of the industry, and balanced stakeholder perspectives, with strong, effective regulatory controls and audits of results.

### **Effectiveness of Regional Entity Delegation**

Congress allowed self-regulatory responsibilities and authorities to be further delegated by the ERO to the Regional Entities, in recognition of the long-standing reliability structures that had been in place for many decades. The industry had long recognized the value of increasingly interconnected operations, formation of power pools and reserve sharing groups, coordination of planning and system protection, and establishment of inter-area operating agreements. In the self-regulatory model described above, the Regional Entities are not simply additional contracted staff to augment the ERO. The Regional Entities are, along with NERC, a key part of the fabric of how the industry has collaborated over many decades to provide a reliable bulk power system. What was previously missing was mandatory and enforceable reliability standards and strong regulatory oversight authority. However, the most effective path forward, at the time of the legislation and still today, is to build from the substantial reliability structures that have existed for decades.

This report, coupled with the individual Regional Entity statements of activities and achievements, evaluates the overall effectiveness of the Regional Entities in executing their delegated responsibilities and authorities. Although delegation can be said to have worked as intended in the first three years of the ERO, there are opportunities for improvement. The existing delegation agreements were blueprints for getting started, but experience has highlighted a number of areas for improvement.

Before reviewing specific improvements to the delegation process, however, it should be acknowledged that perfecting delegation was not at the forefront of priorities during the first three years and should not have been expected. It was instead a priority to transform NERC and the Regional Entities into organizations with the governance, resources, rules, procedures, and tools necessary to perform the delegated statutory functions — and that was accomplished. Another priority was processing the thousands of compliance violations reported leading up to and after the standards became mandatory on June 18, 2007 along with reviewing and verifying completion of plans to mitigate those violations — and significant progress has been made on that front. A third priority has been establishing the appropriate due processes for registered entities, such as required notices, rules regarding settlements, hearing procedures and the like — and that has been accomplished.

Delegation as it relates to the ERO is a conscious choice between centralizing or decentralizing certain ERO functions. A careful evaluation of the benefits as well as the drawbacks and risks of delegation provide insight into which functions should be delegated and how delegation should be managed. The industry, as well as Congress, FERC, and Canadian authorities saw significant benefits to delegation, some of which have been previously described, and allowed delegation of certain functions to the Regional Entities in the statutes and regulations. The benefits of delegating, or performing certain ERO functions in a decentralized manner, may be further described as follows:

- A primary advantage of a decentralized business model for certain statutory functions is that it leverages local knowledge, resources, and understanding of the bulk power system and its owners, operators, and users. This is particularly true in the electricity industry, where systems have been developed for more than 100 years in a decentralized manner. Electric systems have been designed and operate differently on a system-by-system basis. The associated specific expertise and knowledge required to effectively evaluate reliable operations lies locally within each Region.
- Decentralization has succeeded in leveraging existing reliability structures and preserved historical bases for reliability within the Regional Entities. The ERO would not have been able to get this far today without the effective implementation of the Regional Entities. As a result, NERC has been able to timely implement the transition from voluntary to mandatory reliability standards.
- Each Regional Entity, within clear boundaries established by delegation, has an opportunity to create innovative solutions and continuously improve performance and efficiency. These solutions can and should be shared among Regional Entities and with NERC.
- Each Regional Entity, once again within the boundaries of delegation criteria, can adapt its operations according to the bulk power system physical attributes and priorities, the

planning and operating practices in the Region, and the needs of diverse stakeholders and ownership models that exist across North America.

- Regional Entities with cross-border relationships can effectively work across international boundaries to ensure consistent implementation of reliability standards, compliance monitoring and enforcement, and reliability data gathering and sharing. With substantial differences even from one province to the next, the local knowledge and relationships are invaluable in the day-to-day execution of delegated functions.
- Reliability stakeholders have historically been active in greater numbers in the Regions than in NERC. The decentralized model effectively extends NERC's reach to involve thousands of stakeholders that would not otherwise be actively engaged.
- Effective delegation of statutory responsibilities and authorities helps to bridge the distance (physical and literal) between national policy and decision-making and the day-to-day implementation at the ground level.
- Although efficiency can also be a disincentive for decentralization, with proper process controls and definition of desired outcomes, decentralized operations can actually be more efficient by shortening lines of communications with registered entities and keeping the day-to-day tasks close to where the problems and solutions are.

There are also potential disadvantages and risks associated with delegation, some of which have been evident in the first three years of operation of the ERO. These may include:

- Divergent visions and directions that may arise through lack of clarity and specificity in the delegation process, or simply through differences of opinion regarding the most effective way to solve a problem.
- Inconsistencies in processes, interpretations of standards, definitions of terms, etc.
- Inefficiencies resulting from duplication of efforts, both between the ERO and Regional Entities and among Regional Entities.
- Inefficiencies resulting from a "not invented here" mentality, in which Regions (and sometimes NERC) believe they need to have unique tools or procedures to perform their work.
- Confusion over roles between the ERO and the Regional Entities, including difficulty distinguishing between oversight roles and execution roles. Taken to extremes, lack of clarity in roles could lead to "turf battles."
- Incomplete communications and missing information that would help each party perform better.
- Divergent or disconnected information management systems and tools.

To maximize the benefits and minimize the risks of delegation, one must understand the factors that can make delegation from the ERO to the Regional Entities successful:

- A strong conviction and singularity of purpose at the executive and board levels of all organizations involved.
- Clear division of responsibilities, both related to the division of performance of the statutory functions and the oversight of those functions.

- Strong, clear standardized procedures, active controls, clearly articulated performance metrics, and checks or audits of performance.
- Clear, frequent communications and transparency among the organizations.
- A cooperative spirit that promotes mutual success and recognizes failure is indivisible — any failure is collectively shared by the ERO and all Regional Entities.
- Mechanisms to resolve conflicts.

### **Opportunities for Improvement in Delegation Process**

It is clear that the current implementation of delegation presents numerous opportunities for improvement. The three-year assessment provides an excellent opportunity to identify necessary improvements and address the tensions that naturally exist in the startup of the ERO and the Regional Entities. As in almost any organizational environment some tension is normal and healthy — a lack of any tension would probably be a sign an organization is not adapting, improving and facing up to challenges. Together, NERC and the Regional Entities have worked hard to address issues of delegation. The renewal of the delegation agreements in May 2010 provides an opportunity to capture some of these improvements in the delegation agreements.

In order to successfully implement a decentralized model over the long term and truly leverage the existing infrastructure, resources, and knowledge in the Regional Entities, NERC should establish and clearly communicate systems, procedures and processes, performance metrics and controls, and training. These should be developed through effective policy study and discourse with Regional Entities.

Identical outcomes in compliance and enforcement decisions should not be expected because of the limitless variation in facts and circumstances combined with the discretionary judgment necessary in such decisions. Effective controls, such as establishing written procedures for the conduct of compliance audits, developing an integrated information management system, and requiring standardized financial reporting accounts are just a few examples of essential elements for successful implementation in a decentralized model and are fundamental to exercising effective oversight.

NERC should emphasize comprehensive training for the Regional Entities to establish a common view towards compliance and enforcement. The comprehensive training should be developed on a coordinated basis using the knowledge gained by the Regional Entities. By establishing a comprehensive training program, NERC would provide an added level of control in the implementation.

Finally, the Regional Entities need to refocus their efforts on the day-to-day responsibilities of administrating a compliance program. Compliance monitoring and enforcement requires the specialized knowledge and training possessed by the Regional Entities. In the event of a large-scale investigation across multiple Regions, NERC should be in the lead. Even in this circumstance, however, the process would benefit from including Regional Entity staff to provide localized insight.

### **Regional Entity Governance**

The Regional Entities believe Regional Entity governance is working as allowed and intended by Congress and the Commission. As stated previously, the ERO model was carefully designed and already provides sufficient checks and balances by requiring all compliance actions and

penalties, including mitigation plans and remedial action directives, must be approved by NERC before filing with FERC in the United States. The Regional Entities fully understand the need to avoid any actual or perceived conflicts of interest, but believe the current structures and procedures provide those safeguards without requiring modifications to the existing governance structures of the Regional Entities.

Each Regional Entity, including those with balanced stakeholder boards, has in place effective controls to ensure independent staff performs the compliance monitoring and discovery processes, evaluates potential violations and makes initial determinations, evaluates the seriousness of the violation and its impacts, and determines appropriate penalties and remedial actions. Regional Entity staffs also evaluate mitigation plans and perform independent reviews of the completion of the mitigation.

The Regional Entity boards, whether they are stakeholder or not, are not involved in the operational decisions surrounding the compliance program. In some instances, they provide oversight regarding internal processes of the Region and, for some Regional Entities, the board or a committee or subset of the board may be involved in the final review and approval of compliance actions before submittal to NERC. In all cases, however, development of the specific facts, conduct of audits, analysis of evidence, basis for determining violations, negotiation of settlements, and determination of penalties are conducted totally by independent staff without involvement of board members. The final review and approval by some of the Regional Entity board-level panels is specifically allowed by FERC and the ERO rules of procedure<sup>16</sup> and is a necessary step to making it clear that submittals are from the corporation, not individuals on staff, much the same as the NERC board Compliance Committee provides final approval of NERC actions filed with FERC.

Furthermore, experience to-date within the Regions indicates the final review of compliance outcomes has improved results. Stakeholders have a vested interest in the reliability of the bulk power system and realize that the weakest link in reliability presents a risk to all. Board-level review often results in approval of staff decisions, but in cases where actions are remanded, the purpose of the remand is typically to gather additional information and substantiation, or to ensure consistency of penalties in different cases. The Regional Entities unequivocally agree the existing Regional Entity governance models have worked in practice to act in the interest of the public with regard to bulk power system reliability. When potential conflicts of interest do arise, each Regional Entity has procedures and controls in place to ensure recusal of any conflicted parties.

Finally, stakeholder representation on Regional Entity boards is required by FERC to be balanced. The possibility that a particular class of entities might engage in self-serving activities is foreclosed by the balance of representation on the boards from all stakeholder sectors, including end-use customers. The fact that all actions must be reviewed and approved by the independent directors and staff at NERC and FERC in the United States eliminates any residual risk of impaired governance reaching improper conclusions regarding compliance actions.

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<sup>16</sup> See NERC Rules of Procedure of *available at*:  
[http://www.nerc.com/files/NERC\\_Rules\\_of\\_Procedure\\_EFFECTIVE\\_20081219.pdf](http://www.nerc.com/files/NERC_Rules_of_Procedure_EFFECTIVE_20081219.pdf)  
July 20, 2009

## Regional Entity Non-Statutory Functions

Performance of non-statutory functions by the Regional Entities is permissible under the statutes and regulations.<sup>17</sup> Four of the Regional Entities have chosen to perform registered functions or have affiliations with Registered Entities for various reasons. In some cases, these were legacy activities performed by a precursor Regional reliability organization. In some cases, as NERC has found with E-Tagging, the Interconnection Distribution Calculator (“IDC”), and the synchrophasor project, there simply isn’t a better organization available to perform an important task in support of reliability.

MRO, NPCC, RFC, SERC, SPP, and TRE believe they currently manage their Compliance Monitoring and Enforcement Programs completely independent from the owners, operators, and users of the Region. Each of these Regions except SPP and TRE has no affiliated registered entity functions, and plans to continue operating in this manner independent from any registered entity functions. SPP RE meets this criterion because it has independent governance over its delegated functions and only delegated functions report to the Regional Entity executive. TRE meets the criterion because it is separate from the owners, operators, and users through functional separation and independence from the ERCOT ISO operations.

The remaining two Regional Entities — FRCC and WECC — believe complete divestiture of non-statutory functions would be detrimental to reliability, as all of their non-statutory functions are performed in the pursuit of improving reliability. These Regional Entities note that there is no conflict if all elements of a Regional Entity’s scope have a common goal of reliability improvement. In previous orders, FERC has confirmed Regional Entities may perform non-statutory functions, as long as there are clear procedures in place to avoid conflicts,<sup>18</sup> and NERC and FERC conduct audits to provide that assurance.

All of the Regional Entities agree that conflicts of interest with statutory functions should not exist and the issue of whether a potential conflict of interest exists should be resolved on a case-by-case basis with the affected Regional Entity. The Regional Entities furthermore agree that a change in policy is unnecessary to address the issue.

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<sup>17</sup> See 18 C.F.R. § 39.4(b); see also Order No. 672 at P 656 (“While the ERO may not delegate other statutory functions to a Regional Entity, the Commission will not prohibit a Regional Entity from performing other reliability-related functions in service to its Region. As commenters indicate, Regional reliability councils currently perform a number of functions beyond the proposal and enforcement of Reliability Standards. A Regional Entity may conduct such activities, provided that they do not conflict or interfere with the performance of a delegated function, which we view as the primary mission of a Regional Entity.”)

<sup>18</sup> See Order No. 672 at P 656; *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062 at P 579 (2006).  
July 20, 2009

## Regional Reliability Standards

In the section that follows, the Regional Entities provide a brief overview of the Regional reliability standards process and scope, and review what has been achieved to date.

### Regional Reliability Standards Processes

The Regional Entities agree with NERC's assessment and the comments of registered entities that the existing reliability standards development process at NERC is working and is effective for the development of bulk power system reliability standards. Although the open and inclusive nature of the standards development process may extend the time needed to develop a standard, it is undoubtedly necessary for due process. The deliberative aspects of the standards development process ensure standards that are fair and reasonable to the owners, operators, and users who must often invest substantially to achieve and maintain compliance.

Each Regional Entity has submitted a Regional reliability standards development procedure that meets NERC's essential criteria, as defined in the NERC Rules of Procedure.<sup>19</sup> Each Regional reliability standards development procedure has been approved by NERC and FERC. Therefore, each of the Regional Entities has fulfilled the obligation to provide an open, fair, balanced, and inclusive process for the development of Regional reliability standards.

It should be noted that development of Regional reliability standards is not necessarily a goal of the ERO. First and foremost, the ERO should promote consistent North American reliability standards. Regional reliability standards address unique requirements in a particular interconnection or geographic Region of the bulk power system, typically driven by physical differences in the electric system. Therefore, there should not be an expectation there will be a large number of Regional reliability standards over time and the relatively small number of Regional reliability standards approved in the initial ERO review period should not in itself be a concern.

Nevertheless, there have been a small number of Regional reliability standards submitted to NERC for approval. The Regional Entities believe that the procedures approved by FERC have been followed in developing these standards, but recognize there are areas for improvement in the process; in particular with respect to communications with NERC staff. Specific descriptions of recommendations for improvement are provided in the WECC, RFC, and MRO Regional self-assessments.

The Regional Entities recognize the value of the Regional Reliability Standards Working Group sponsored by NERC and recommend this group continue its activities of coordinating standards development across all Regions.

### Regional Fill-in-the-Blank Standards and Regional Criteria

When the Commission approved 83 reliability standards in Order No. 693, it withheld a decision on certain standards that referred to Regional requirements that were not specifically noted within the standards.<sup>20</sup> These were referred to as "fill-in-the-blank", meaning the entity had to refer to a Regional document for the answer of what level of performance was required. Such

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<sup>19</sup> See Rules of Procedure of the North American Electric Reliability Corp., Section 300 – Reliability Standards Development, *available at*: <http://www.nerc.com>.

<sup>20</sup> See Order No. 693 at P 297.

requirements cannot be made enforceable until approved by FERC in the United States. The Regional Entities are concerned because the Regional “fill-in-the-blank” reliability standards have not been completed and this creates reliability risks. A number of stakeholders also commented on this issue, noting the lack of clarity and the risks faced by registered entities caused by approved FERC standards that refer to Regional criteria that are either nonexistent or not approved by FERC.

In this area, the Regional Entities must operate within the bounds of NERC’s three-year work plan schedule and, in some cases, must await the completion of NERC performance criteria before completing the Regional standards. This has created a risk of the occurrence of a significant system event for which there are no enforceable criteria. The area of greatest concern is in under-frequency load shedding, but there are several other key areas, including contingency response reserves, disturbance monitoring equipment, and relay mis-operation reporting. In some instances, NERC has questioned whether Regional standards are still necessary in these areas, creating further hesitation in the Regional development efforts. The Regional Entities request NERC finalize any North American criteria for each of these areas as soon as possible, which may include a determination that Regional standards are not required, and set a schedule for completion of any required Regional reliability standards so this area of risk can be eliminated.

### **Prioritization of Standards Work**

The Regional Entities share a concern that was a common theme among many stakeholders; resources are stretched very thin in the current standards development activity. There are over 300 volunteers working at any point in time on over 30 standards development projects. Additionally, there are hundreds more who review proposed standards, provide comments, and vote. The Regional Entities agree the NERC work plan may be too ambitious in that it attempts to address too many standards development activities at once and that there has been an insufficient prioritization of reliability standards.

Furthermore, the Regional Entities support the view of many stakeholders that there are currently too many standards and requirements, with many of them not based on performance and accordingly should not be high priorities in ensuring the reliability of the bulk power system. NERC’s approach has been to incorporate every standard translated from the pre-ERO operating policies and planning standards, and then to simply add more requirements and specificity. Some stakeholders note in their comments that even what they view to be commercial standards, such as those related to ATC and TTC, were swept into the process.

This may actually be harmful to reliability because resources that could be dedicated to ensuring compliance with the discrete set of reliability requirements necessary to avoid wide-area cascading failures are dissipated through an indiscriminating effort to equally promulgate and enforce all requirements, including those that have little impact on reliability or are only ancillary to those requirements that do. Not every standard and requirement is equal in its relationship to reliability, and the Regional Entities believe the work should be prioritized to recognize that. Industry input should be sought to prioritize reliability standards development. NERC should also consider reviewing existing standards for an opportunity to retire less important requirements or convert them to guides or reference materials.



## **Compliance Monitoring and Enforcement**

The Compliance Monitoring and Enforcement Program has been a great success in the first three years of the ERO, but it is also an area that presents the greatest need for additional work, both within Regional Entities and NERC. The compliance monitoring and enforcement authorities, including imposing penalties up to \$1,000,000 per day per violation, are a significant change from the past, when standards were voluntary. This substantial change at the onset of the ERO has presented a number of growing pains, but at the same time, NERC and the Regional Entities have established a strong foundation from which to build.

A fact that is easily overlooked in an evaluation of the compliance program is that it is unique in both its design and the speed of its growth. The Regional Entities believe there is no regulatory precedent for moving, in the two years since June 2007, from a period of voluntary compliance to the processing of over 2,764 possible violations of mandatory reliability standards. Indeed, many details in the program had to be addressed and adjustments implemented by both NERC and the Regional Entities where necessary, while processing actual alleged violations.

Although the focus of this section is on areas for improvement, it is clear that the first three years of the compliance program must be considered a success. Achievements include establishing the registration criteria and registering 1,839 bulk power system owners, operators, and users, processing over 5,039 pre-June 18, 2007 violations and mitigation plans, establishing procedures and templates for improving consistency in the processing of alleged violations, conducting nearly 600 audits, and training compliance staffs. The industry survey indicates strong support from registered entities that NERC and the Regional Entities have been effective in promoting a culture of compliance and internal self-assessment by registered entities.

The issues described in the remainder of this section offer opportunities to further improve the compliance program in the next five-year assessment period.

### **Compliance Registry**

On the whole, the compliance registry has been one of the more successful aspects of the Compliance Monitoring and Enforcement Program. The registration criteria establish benchmarks for including, or excluding, entities within the jurisdiction of mandatory reliability standards. The registration criteria provided an essential first step to implementing the broad language of EPAct 2005's applicability. The registry serves to provide clear notice to entities on the list that they must comply with standards applicable to the functions for which they are registered. Although there have been several appeals of registration status, the vast majority of registrations have been accepted by owners, operators, and users.

There are several possible improvements that should be evaluated:

- There is a need to more efficiently address multi-Regional entities. There are instances where an entity straddles two or more Regions, and thus is subject to requirements to report compliance information to multiple Regions and multiple compliance programs. In fact, there are even national or North American businesses that operate facilities in all eight Regions. NERC and the Regional Entities, in concert with stakeholders, should devise approaches to efficiently manage the compliance monitoring of multi-Regional entities, such as cross-delegation (assigning one Region to monitor compliance.) This

approach should be designed to focus on consistent results and maximizing efficiency by avoiding duplication of effort.

- At this point, a sufficient number of audits and compliance actions have been processed to legitimately consider whether the scope of the registration criteria has been appropriately defined to protect reliability. This issue is raised by many stakeholders in the survey who believe the registration criteria have captured many smaller entities near the radial ends of the bulk power system that have no reliability impacts on any one other than themselves and their own customers. Some registered entities note in the survey that both NERC and Regional drafting teams are adopting applicability criteria that extend beyond those defined in the registration criteria, which could be problematic if there are standards that apply to entities not registered. NERC and the Regional Entities, in consultation with stakeholders, should review the registration criteria to determine if there should be a different threshold for materiality to the reliability of the bulk power system and to determine if compliance resources could be better prioritized by changes to the registration criteria.
- There have been instances in which entities requested to change their registration (and membership) from one Regional Entity to another. Although there may be legitimate business reasons for such requests, there is a possibility that such entities may be “forum shopping” or seeking different treatment with respect to Regional reliability standards or the Compliance Monitoring and Enforcement Program. NERC and the Regional Entities should develop a procedure to provide a registered entity a fair process to present justifications for moving from one Region to another and for NERC and/or the Regional Entities involved to make an informed decision. Improving consistency among Regions should further minimize any inappropriate motives for relocating from one Region to another.
- In the industry survey, commenters noted that one of the greatest challenges with compliance registration is the definitions provided in the Functional Model are conceptual and registered entities have (for historical or business reasons) often aligned their operations differently. Sometimes certain responsibilities tied to a portion of the reliability standards are delegated to another organization, such as an RTO/ISO or a Generation and Transmission (G&T) membership organization. There has been some discussion among stakeholders regarding whether there is a need to revise the Functional Model. However, redefining the terms of various functions may be impractical as it is unlikely to ever resolve the immense diversity of organizational structures in the industry. A long-term solution for possible consideration is to increase the granularity of registration so it focuses on the requirement level, instead of at the standard level. Registration could also include registration by bulk power system facility, or classes of facilities. Such changes would be dependent on establishing a relational database and tools for registered entities to self-register online.
- One issue that remains unresolved at the end of the initial three-year assessment period is the registration status of U.S. government agencies, such as the U.S. Army Corps of Engineers, that operate facilities that fall within the registration criteria. Although FERC has directed that these facilities and organizations must be included within the jurisdiction of the mandatory reliability standards,<sup>21</sup> this issue has not been finally resolved due to the potential for appeals of compliance actions on the basis of

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<sup>21</sup> See, e.g., *Southeastern Power Administration*, 125 FERC ¶ 61,294 (2008).

jurisdiction. The Regional Entities believe these types of appeals should not be addressed within the Regional hearing process because that process is not designed to handle matters of law. The ERO hearing process instead is designed to evaluate facts to determine whether or not there has been a violation of a reliability standard, and if so, what the penalty and corrective actions should be. Regional Entities recommend FERC should indicate it will provide the forum for determining legal challenges of jurisdiction between federal agencies and not expect such matters should be heard by a Regional Entity hearing body or a NERC appellate body.

### **Consistency and Use of Discretion in Application of Penalties**

One expectation of the compliance program is there should be consistency in the application of penalties for violations of standards across various Regions and the amount of a penalty should reasonably fit the nature and circumstances of the violation. This is a reasonable expectation and NERC and the Regional Entities have worked toward this goal.

The Sanctions Guidelines provided in the ERO rules of procedure create a range of penalties, with general bounds, for various risk factors and violation severity levels. However, the ranges within the tables are wide and leave significant discretion, sometimes with order of magnitude differences. NERC has developed a penalty calculator tool as an aid for determining consistent outcomes in light of aggravating or mitigating circumstances surrounding a possible violation, such as the value to assign a registered entity's self-report or degree of cooperation. There has been some tension with stakeholders, confirmed by the survey results, who believe there is too much uncertainty in the penalty guidelines (allowable ranges are too wide) and the penalty calculator tool should be made public. However, the tool is simply a guide and most Regional Entities have proceeded to apply a more rigorous analytical assessment of the penalty, rather than relying solely on the tool.

With or without the penalty calculator tool, the fact is there is a wide range of penalties possible for a violation of a particular requirement in the standards. NERC and the Regional Entities can take several steps to ensure consistency. First, the Notices of Penalty that have been accepted by FERC and made public provide precedent for the Regional Entities to consider in future cases. The advantage of providing a more complete record for each case, as has been required by FERC, is that Regional Entities and registered entities can understand the detailed facts of a case and how those facts were considered in determining an appropriate penalty. Future cases should be guided by these outcomes and over time hundreds and thousands of completed cases will provide a richer base of precedent.

For uncomplicated cases, such as those with relatively low penalty amounts, NERC should establish baseline penalty amounts as a guide for each requirement. These baseline penalty amounts should distinguish between self-reported violations and those not self-reported, and between violations caused by a lack of documentation and those cause by a lack of performance. Establishing baseline penalty expectations for lower level violations without complicating circumstances would substantially simplify the enforcement process and increase certainty in the negotiation of settlements.

It should not be expected, however, that the Regional Entities will produce identical penalty outcomes for all violations of a particular requirement. The facts and circumstances of each case are unique; this is a basic proposition that underlies the rationale for the flexibility and mitigating factors of the violation risk factors that are necessary for due process. For lower priority

violations, there may be value to sacrificing efforts to closely match penalty outcomes with the facts of a case, in order to achieve consistent outcomes across the Regions. For example, reliability goals are not furthered by spending \$50,000 in resources to resolve whether a penalty for a low priority violation should be \$2,000 or \$4,000. However, for more complex and serious cases, there should be an expectation that penalties will vary from case to case based on the facts of the case and the judgment of Regional Entity staffs. The penalties should be scaled to the seriousness of the violation and should consider all of the aggravating and mitigating factors. But if the Regional Entity produces a reasonable outcome consistent with the broad guidelines established by NERC, there should not be an expectation of identical or imitative results from one case to another.

During the three-year assessment period, NERC has implemented a practice of reviewing every violation submitted by a Regional Entity in detail, with NERC staff presenting its own independent recommendation to the NERC Board of Trustees Compliance Committee. This approach may be suitable for more serious cases, but is very duplicative and inefficient for most low priority violation cases. NERC should establish procedures to more effectively prioritize cases for review. Based on case history to date, a conservative estimate is that at least a third or more of all cases would be suitable for standardized penalties, as suggested above, greater deference to the Region, and for approval at NERC through a consent agenda of the board Compliance Committee or delegation to NERC staff.

Consistency in penalties could be further enhanced if the board Compliance Committee would select unique cases with precedential value and issue their decision, either approving or remanding a case, to all Regional Entities (non publicly.) This approach would be informative to the Regional staffs in enforcement who are developing the cases and penalties and would be helpful in conducting settlements. These “guideposts” would be a very beneficial method for the board Compliance Committee to set expectations or boundaries of reasonable outcomes. Regardless of whether the board develops a written opinion on a case, all decisions of the board, including remands, should be shared with all of the Regional Entities as a method of further distinguishing minimum expectations.

With respect to the proposal raised in the NERC self-assessment that NERC staff should be consulted earlier in the process to settle on a reasonable penalty, the Regional Entities believe this approach would be unnecessary and of little value, if the more prospective steps outlined above are taken to establish standing guidance to the Regions. Furthermore, intervening at the formative stage of determining a violation and a penalty would undermine the delegated authority of the Regional Entity and minimize the credibility of the Regional Entity. Moreover, this approach would compromise the independence of NERC’s subsequent review and approval of the compliance action, as well as NERC’s ability to entertain appeals on the case — a critical role in which NERC should be unbiased and not have a predetermined notion of the proper outcome.

### **Compliance Monitoring and Enforcement Process Consistency**

Many stakeholders have expressed concerns, both through the survey and over the past two years, with inconsistencies in the implementation of the Compliance Monitoring and Enforcement Program across the eight Regions. The Regional Entities agree with the stakeholders and NERC that this is an important issue to address.

The underlying reason for inconsistencies is the rules of procedure, delegation agreements, and existing regulations do not provide guidance in many cases on how to implement the program. For example, there have been many discussions among Regions and NERC regarding what information is required to be within the record to substantiate a violation. FERC added further guidance in its July 3, 2008 *Order on Filing Reliability Notices of Penalty*.<sup>22</sup> In addition, there were a number of templates that were developed “just in time” through experience in the early cases.

The Regional Entities believe consistency has improved with experience, but are taking proactive steps to continue improving consistency. The Regional Entity staffs have formed the Regional Entity Management Group to steer the Regions toward consistent and effective implementation of delegated responsibilities. The Regional Entities have also formed the Regional Compliance Implementation Group and over a dozen working groups to coordinate various aspects of the compliance process implementation. The Regional Entities believe this interRegional coordination activity will be most effective in achieving the goal of consistency if NERC compliance staff actively participates in setting priorities, providing guidance, and reviewing results; the Regions welcome such participation.

As the ERO, NERC has an opportunity to improve consistency and efficiency by publishing forms, procedures, and other documents that would aid in removing variation in program implementation among the Regional Entities. However, this guidance should be developed in collaboration with the Regional Entities because practical experience with audits and compliance enforcement will provide valuable feedback on the best set of tools to improve the process. NERC should also develop consistent performance metrics for the Regions and audit performance.

NERC can also further enhance consistency through more open and transparent communications with the Regional Entities. For example, NERC staff reviews settlements and alleged violations and presents its final recommendations to the NERC Board of Trustees Compliance Committee without consulting with Regional compliance staff. It would be more efficient if the NERC compliance staff believes the submittal to be deficient to first resolve any issues with the Regional staff prior to submittal to the board Compliance Committee. Second, NERC legal staff completes a final review of all settlements and confirmed violations prior to filing of a Notice of Penalty (after board Compliance Committee approval). Typically, this results in additional changes after the registered entity and the Region have executed a settlement agreement, and after the Regional board or review panel has approved the action, and the board Compliance Committee has acted. This sequence between the Regional Entities and NERC is inefficient and could be improved.

Over the next few years, there should be an expectation that process consistency will be further enhanced by the introduction of compliance information management systems that provide seamless flow of compliance information from registered entities, through the Regions, to NERC.

### **Compliance Audit Consistency**

NERC and the Regional Entities have made significant progress in ensuring consistency of compliance audits, although substantial work remains in this area as well. Most registered

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<sup>22</sup> See *Guidance on Filing Reliability Notices of Penalty*, 124 FERC ¶ 61,015 (2008).

entities agree in the survey that NERC and Regional Entity staffs are professional, thorough, and efficient in the conduct of audits.

NERC has published, with the assistance of the Regions, a set of Reliability Standards Audit Worksheets to guide the audit process. These guides have been made public and are available to registered entities in preparing for audits. These forms are a helpful step toward ensuring audits are consistent to the extent they provide guidance on what standards will be reviewed, what questions will be addressed, and how evidence of compliance is noted.

A second activity to ensure consistency has been auditor training. NERC has provided face-to-face training sessions as well as an online training module for auditors. To date, however, the training is somewhat limited to training personnel with utility experience and knowledge of the bulk power system in techniques for being an effective auditor. Several Regions have initiated supplemental training to reinforce the NERC training. However, NERC needs to develop substantially more training for auditors; an “auditor academy,” consisting of several weeks of comprehensive training, could be an adequate solution. The training should include auditing methods and ethics, the NERC audit procedures, and, even more importantly, how to arrive at consistent decisions with respect to the amount and quality of evidence sufficient to demonstrate compliance.

NERC and FERC have sometimes provided observers when a Regional Entity is auditing a registered entity. This approach has led to some confusion in responsibilities. In some cases, the NERC and FERC staffs have engaged in the audit process and exceeded the inquiries that would have been asked by the Regional Entity staff; in other cases, NERC and FERC staff are simply observers. A preferred approach would be for NERC to set expectations and provide them through procedures or training, and then to selectively audit results after the fact to determine if outcomes are within guidelines. Even if this approach is adopted, the Regional Entities would continue to welcome NERC and FERC staff presence as audit observers, as well as the occasional sharing of audit staff among Regional Entities, as means of sharing best practices and improving performance.

### **Consistency in Interpretation of Reliability Standards**

NERC and the Regional Entities understand the need to promote consistency in compliance activities to the greatest extent possible. Consistency will add certainty and inspire confidence in registered entities and will result in a higher level of compliance and better performance across the industry. To that end, NERC developed a series of Reliability Standard Audit Worksheets (RSAWs) to provide a common basis and guidance for Regional auditor teams. These audit worksheets also greatly benefit the registered entities, as they serve as guides to help identify the types and degrees of evidence typically necessary to demonstrate compliance with reliability standards. Registered entities are encouraged to use the RSAWs in their internal compliance programs and to prepare for compliance audits conducted by the Regional Entities. In addition, registered entities are required by Regional Entities to complete the questions in the RSAWs and submit their responses to the Regional Entity prior to the on-site audit in order to increase the efficiency of the auditing process and reduce time spent on-site.

The RSAWs are not definitive, as noted in their disclaimer, but intended rather as guidance, and registered entities should be able to present alternative evidence of compliance. Some commenters in the industry survey indicate improvements could be made in the RSAWs by

providing clearer expectations of evidence to show compliance and by ensuring RSAWs do not expand the requirements of the standards.

NERC has undertaken an initiative to review and update the current RSAWs and create new RSAWs for standards and requirements that need them. This effort should bring a higher level of consistency and uniformity in compliance audits (as well as addressing other concerns that registered entities have raised concerning the form and organization of the RSAWs.) It should also allay concerns raised by stakeholders that the tools auditors rely upon to audit compliance should not extend beyond the terms of the FERC-approved standards. Continuous improvement based upon feedback and lessons learned in the field is an important goal in the compliance program and the periodic updating of the RSAWs fits within this construct.

Regional Entities believe that their auditors must apply the plain language of the standard when conducting compliance reviews rather than engage in extemporaneous interpretations of intent. When questions arise regarding the application of standards, NERC and its Regional Entities confer to determine how to consistently and correctly apply the plain language of the standard. If agreement cannot be reached, if the standard is too unclear to be practically applied, or if the standard is deficient and must be amended before it can truly promote and safeguard reliability, then the Regional Entities have, and will continue to, work with NERC staff to employ the ANSI-accredited NERC standards development process to effect the necessary changes or to seek a formal interpretation.

Some registered entities note in their comments that NERC and FERC seem to have much stricter interpretations of requirements and these interpretations sometimes seem to adopt best practices or even future requirements. Regional Entities recognize when FERC issued Order No. 693 approving the standards it also applied interpretations that expanded the plain language of the requirements developed through the industry-based open standards process. When expectations associated with reliability standards appear to exceed or, at the very least, are not clearly identified in the approved standard, NERC should make all registered entities aware of such expectations. This should be done centrally, to promote consistency of the message and issuance, and it should be done publicly so registered entities can meet these expectations and demonstrate compliance. Keeping increased expectations confidential is inconsistent with maintaining the reliability of the bulk electric system and will not reduce the time spent on processing backlogged violations.

### **Compliance Case Load Backlog**

NERC (collectively across all eight Regions) currently has 1,784 alleged violations being processed and continues to receive on average nearly 125 new allegations of reliability standard violations per month. Of these, a portion typically are dismissed after review indicates they are not violations, thus leaving approximately 90 new allegations to be processed each month on top of the existing case load. The ensuing process is very formal, with each violation processed through the CMEP in the same manner regardless of its significance to the reliability of the bulk power system.

Many commenters expressed concerns regarding the volume of compliance work facing the Regional Entities and NERC, as well as a desire to see violations and settlements to completion, and therefore made public, in a more expeditious manner. Making these enforcement actions public provides valuable lessons learned to the industry stakeholders and provides guidance to all registered entities that will improve performance and future compliance with the reliability

standards. However, the protections established to safeguard the confidentiality of registered entities with alleged violations of reliability standards prohibit publishing the violations until NERC's review is complete and the violation has been filed with FERC, which, to date, typically takes a minimum of five to six months.

An alternative way to provide guidance to registered entities while still protecting confidentiality rights and due process is to publicly share lessons learned, provide examples of what is necessary to demonstrate sufficient evidence of compliance, and list common mode failures that have led to past non-compliance. Such a proactive approach to promoting compliance will reduce pressures on processing the backlog of alleged violations by helping registered entities avoid becoming non-compliant in the first place. This approach has the added benefit of achieving higher levels of reliability in a more expeditious manner.

There are additional steps that can be taken to improve the speed and effectiveness of violation processing, as listed below and discussed in subsequent sections of this report.

1. NERC and Regional Entities should adopt a risk-based approach and focus on auditing requirements that are most important to bulk power system reliability, and those experiencing chronic problems.
2. More resources should be added at Regional Entities and NERC to address key bottleneck areas in the processing of alleged violations.
3. Time and effort should be spent to help registered entities better understand compliance requirements to avoid being found non-compliant in the first place.
4. More tools are necessary to expedite the administration of minor infractions.
5. Documentation-related violations may not always need to be addressed via the entire existing compliance process.

The Regional Entities learned many valuable lessons over the past three years as they processed the initial wave of alleged violations. Regions and NERC should make it a priority to share these lessons with each other so mistakes will not be repeated.

1. Violations should be processed with an approach that prioritizes their review according to their risk to reliability.
2. NERC should strive to avoid performing *de novo* review of violations that are processed by the Regional Entities, or, at a minimum, limit such review to violations of those standards with the highest priority.
3. New or modified compliance and enforcement processes should be tested prior to implementation and feedback loops should be established to continually improve these processes based upon field experience.
4. New or modified compliance and enforcement processes and expectations should be clearly communicated to registered entities prior to implementation.

### **Treatment of Minor Violations**

To date, approximately 50 percent of all violations have been documentation-related violations, meaning that the entity is performing the task required by the standard (including having the required documents), but may not have sufficiently documented evidence to demonstrate compliance to the standard. Processing these violations using the same degree of rigor and same procedures as non-documentation violations can result in a less efficient program and slower



average processing time due to the sheer volume of documentation violations. Each requirement in the standard is given a violation risk factor and many of the documentation requirements are assigned a “lower” violation risk factor. The Regions concur with NERC’s recommendations to address this situation.

As part of the review of the standards, it is fair to question if all documentation requirements in a standard should rise to the level of being an enforceable requirement in the standard. This review should be part of the Standards Work Plan.

Identifying and removing from standards any unnecessary requirements related to documentation will reduce the volume of work and focus the compliance monitoring and enforcement activities on those requirements of the standards where an entity is required to perform a function or a task. The compliance administration elements could then include the data retention requirements and documentation necessary to demonstrate compliance.

The processing of each alleged violation of a reliability standard carries with it full due process for the registered entity in accordance with the process steps included in the Compliance Monitoring and Enforcement Program. Processing all alleged violations in this manner is inefficient, particularly for those violations of much less significance to the reliability of the bulk-power system. To address this issue, NERC and the Regional Entities have developed a pro-forma settlement agreement designed to work within the construct of the existing rules of procedure, to be used for a set of standards and requirements where the entity is performing the necessary task, but certain documentation may be missing or incomplete. For a pre-defined set of reliability standard requirements and for a given set of circumstances, a pro-forma settlement agreement can be presented to the registered entity stating the terms and conditions of the settlement, including a pre-determined penalty.

Use of the pro-forma settlement agreement eliminates a good deal of the process paperwork and investigation necessary to bring a violation to the filing stage and there would be an abbreviated record. This process will streamline and shorten settlement negotiations while providing certainty to registered entities that the bilateral agreement reached with the Region will be approved unchanged by NERC. Regional Entities recommend the use of the pro-forma settlement process be expanded from its current scope.

Some stakeholders have suggested NERC and the Regional Entities should go further in this area by allowing the issuance of a warning to a registered entity that is not complying with a reliability standard. The Regional Entities recommend that the concept of a warning or “traffic ticket” be further developed as an option for handling and correcting minor administrative infractions.

### **Compliance Information Management Tools**

NERC and the Regional Entities implemented the mandatory Compliance Monitoring and Enforcement Program on June 18, 2007 with a series of data management tools based on a variety of data platforms and tools. These were generally extensions of the tools in existence prior to the standards becoming mandatory and consisted (to a large degree) of simple databases or spreadsheets.

Lacking a common compliance information management platform from NERC, all eight Regional Entities have adopted online, secure tools for electronic management of compliance information received from registered entities. Six of the Regions (FRCC, NPCC, RFC, SERC,

TRE, and WECC) have converged on a single software platform for the management of compliance information. MRO and SPP have adopted a different program with a similar scope. NERC is in the process of developing its own data platform and tools for management of compliance information, utilizing the same vendor as the six-Region consortium. Regional Entities agree with NERC that a single, integrated information systems approach should be implemented.

### **Compliance Process Transparency**

In order to achieve the best possible results — both from an efficiency standpoint and from a reliability standpoint — the compliance process must be as transparent as practical without disclosing the confidential information of a particular compliance case prior to filing of an action with FERC. There are two aspects to the needed transparency; within the ERO and the Regional Entities and between the ERO and its registrants.

#### Within the ERO and the Regional Entities

The initial oversight approach tested by the ERO stresses an independent review of compliance actions conducted by the Regional Entities. While this certainly provides an independent verification of facts and judgment, the efficiency and effectiveness can also be questioned. While such an approach may have made sense initially, it appears to be inefficient in a stable program.

Because NERC basically conducts its own *de novo* review of every violation, it requires duplication of effort in the determination of the record, the level of the financial sanction, and the appropriate mitigating actions. The duplication, as opposed to oversight, causes delay in processing violations, requires extra resources, and can undermine the credibility of the process as registered entities are not certain of outcomes until the process has been run twice.

The Regional Entities suggest the following:

1. NERC staff should provide oversight rather than duplicative review on the vast majority of confirmed violations they receive from the Regional Entities. Many of the violations are routine and need only a review of key outcomes for consistency purposes.
2. NERC staff and the board Compliance Committee should provide a more in-depth review on an exception basis, based upon the severity of the violation, the uniqueness of it, the impact to reliability, etc.
3. NERC should openly communicate its expectations, the deficiencies found in Regional submittals, and other necessary information to all Regional Entities.

#### The ERO and its Registrants

Neither the ERO nor its Regional Entities can or should instruct a registered entity on *how* best to be compliant with reliability standards. But some transparency in the compliance process will at least manage the expectations of the registered entities. Comments received from stakeholders indicate that to them, the compliance process is a “black box” into which they submit information and receive a response many, many months later. Information can and should be shared to improve the quality and efficiency of the process:

1. How do the Regional Entities and NERC process compliance violations? What is the process and how long does it take?

2. How are penalties determined and applied?
3. What standards are violated with the greatest frequency? Why? What is being done to address this?
4. Are there common modes of failure that can be avoided by simply better educating industry stakeholders regarding the expectations of the standards?

Waiting until public filings of confirmed violations occurs may be too late; the Regional Entities encourage NERC to share non-confidential information with registered entities much earlier in the process to reduce the number of non-compliances encountered. This action will not only improve reliability, it will reduce violation backlogs. The Regional Entities have already collaborated on forensics for Reliability Standard PRC-005 violations and pledge their support to help NERC with other highly violated standards.

### **Hearings and Appeals**

Experience with hearings and appeals is very limited, as only one or two alleged violations have reached the hearing stage; even in those cases, settlements were later reached. No appeals of alleged violations or penalties have been sought to date.

The Regional Entities jointly developed common hearing procedures and shared these with NERC, who also adopted them. Additionally, the Regional Entities have shared their hearing officers among themselves and with NERC, and have conducted practice sessions to test the hearing process and held workshops for their hearing bodies. The procedures are rigorous and legalistic but must be so in order to properly protect the rights of registered entities.

The Regional Entities encourage NERC to test its own hearing and appeal processes prior to implementation. Many lessons can be learned and improvements made after such a session. In certain circumstances, the NERC Compliance and Certification Committee is designated as the hearing body and the Regional Entities ask NERC to consider whether that is an optimal arrangement. An alternative approach is that, in such situations, a disinterested Regional Entity can act as the hearing body because it has the benefit of independent hearing officers, a well-designed process, and the independence associated with Regions governed by NERC's Rules of Procedure and delegation agreements.

## **Other Statutory Functions**

### **Reliability Assessment**

In accordance with §215(g) of the Federal Power Act, NERC as the ERO is charged with conducting periodic assessments of the reliability and adequacy of the bulk power system in North America. To fulfill this mandate, NERC prepares three reliability assessment reports each year. NERC prepares its reliability assessments, including its independent evaluation, with detailed data, information, and Regional self-assessments, as well as the active support of an industry-based Reliability Assessment Subcommittee (which is under the direction of the balanced stakeholder NERC Planning Committee), with additional review from the NERC Operating Committee.

The NERC Planning Committee approved a Reliability Assessment Improvement Plan to provide clearer definitions and metrics, and through its Reliability Assessment Guidebook Task Force is establishing guidelines to: (i) improve the consistency and transparency of assessments; (ii) provide for more granular assessments; (iii) outline the process to assess emerging industry issues; and (iv) establish a core framework for NERC when conducting comprehensive and independent assessments. These actions have significantly enhanced the quality of the reliability assessments.

In its evaluations of the Regional Entities with respect to reliability assessments, NERC provided specific performance information and suggestions for improvement in each of the Regional Entities in the following areas: (i) data checking and validation; (ii) reliability assessment process and procedures; (iii) stakeholder/member involvement; and (iv) overall quality and timeliness. It is the view of the Regional Entities that the collaborative work of finalizing the Reliability Assessment Guidebook will collectively and consistently address any identified areas for improvement. Regional Entities believe that the reliability assessment process that is currently in place is effective and has improved during the initial review period of ERO performance, and this view is supported by stakeholder comments from the industry survey.

### **Event Analysis**

NERC's Event Analysis and Information Exchange program performs analysis of outages and disturbances to determine root causes and lessons learned; to detect emerging trends; and to communicate results, recommendations, and alerts to those in the industry responsible to take actions.

A number of industry concerns were expressed regarding the lack of timeliness and specificity of information in the dissemination of lessons learned and alerts, as well as the need to prioritize and establish threshold criteria for the analysis of events. The Regional Entities support these comments and recommend the Event Analysis Coordinating Group directly interface with the NERC Operating Committee to enhance stakeholder, Regional and NERC staff collaboration to address these issues.

### **Situation Awareness**

NERC and the Regional Entities are actively participating with FERC to enhance situation awareness. In support of this initiative, Reliability Coordinators have developed procedures to provide near-real time overviews of operating information for their respective footprints to FERC, NERC, and the Regional Entities in order to permit FERC to “measure the health” of the Interconnections and to monitor parameters which may warn of a developing crisis. The geographic displays provide a dynamically updated view of near-real time system conditions. It is essential that communication protocols be adhered to in order to prevent this effort from being a detriment to system reliability by exposing system operators to distracting inquiries during emergency situations.

### **Critical Infrastructure Protection**

NERC has an essential role in the education of the industry regarding the applicability of the Critical Infrastructure Protection Standards. The Regional Entities, however, recommend that any Technical Feasibility Exception (TFE) requests should in the first instance go to the Regional Entity, and not to NERC as proposed in an amendment to the rules of procedure. The Regional Entities further recommend the TFE process be structured similarly to the mitigation plan process, wherein the registered entity works with the Regional Entity which would have knowledge of the local issues in order to establish an acceptable plan. In preparing to conduct audits of the CIP standards, the Regional Entities have been, and continue to, hire CIP experts and will be in a position to address TFE requests. Part of the draft TFE review process calls for an operational reliability assessment and the Regional Entities are best qualified to make this determination.

**ATTACHMENT 4A**

**FLORIDA RELIABILITY COORDINATING COUNCIL**

**STATEMENT OF ACTIVITIES AND ACHIEVEMENTS**



## **Florida Reliability Coordinating Council's Statement of its Activities, Achievements and Effectiveness in Carrying Out its Delegated Responsibilities**

### **INTRODUCTION**

The North American Electric Reliability Corporation (NERC) is required pursuant to the regulations of the Federal Energy Regulatory Commission's (FERC) at 18 C.F.R. §39.3(c), to submit an assessment of its performance three years from the date of NERC's certification as the Electric Reliability Organization ("ERO"), and every five years thereafter. NERC must include in its self-assessment an assessment of the effectiveness of each Regional Entity. In this regard, NERC has requested that each Regional Entity provide a Statement of Activities and Accomplishments for distribution and public comment. The principal focus of the Regional Entity assessments is in the statutory areas of Reliability Standards development and Organization Registration and Compliance Monitoring and Enforcement Programs. Additionally, the assessments include a less extensive discussion of activities in the other four statutory program areas. The initial performance assessment report is due to be filed with the FERC by July 20, 2009.

Public comment on the first draft of NERC and the Regional Entities' Statement of Activities and Achievements was solicited on January 14, 2009 by a questionnaire posted on the NERC web site. The FRCC analyzed the data received and identified areas for improvement based on stakeholder input in the areas of Reliability Standards and Compliance. The FRCC stakeholders have indicated that more training on NERC standards is needed. In this regard, the FRCC will provide one (1) Standards training seminar in 2009 and three (3) Standards training seminars in 2010.

The FRCC stakeholders commented on the need to ensure that the registration process is consistent throughout North America. The FRCC has taken steps to become more consistent by deregistering generators connected at less than 100 kV. The FRCC now believes that it is consistent with the other seven (7) Regional Entities.

The FRCC stakeholders have also identified the need to process Compliance audits and violations in a timelier manner. The FRCC will be improving the processing time of audits and violations, and will provide more education in the Compliance area. The FRCC will be adding three (3) additional staff in the compliance area including a position dedicated to enforcement to help with the growing workload in the settlement of alleged violations. The FRCC believes that the additional staff, the experienced gained in the last 18 months and the improvement in

processes will result in more timely processing of audits and alleged violations. In addition, the Compliance workshops planned for 2009 will focus on education for the additions/improvements to the Compliance Tracking System web portal. The FRCC will also continue to provide educational materials furthering the transparency and understanding of the compliance process and expectations.

This version of FRCC's Statement of Activities and Achievements has been updated with data and information through May 31, 2009.

## **BACKGROUND**

The Florida Reliability Coordinating Council ("FRCC") is a not-for-profit company incorporated in the State of Florida. The FRCC was established in 1996 as the tenth region of the NERC. Florida's unique geography and its highly integrated transmission system coupled with its single interface boundary to the rest of the eastern interconnection required the development of a reliability based philosophy in the FRCC Region. The purpose of the FRCC is to ensure and enhance the reliability and adequacy of the bulk electricity supply in Florida through development of regional reliability standards, compliance assessment and enforcement of NERC and regional reliability standards, coordination of system planning, design and operations and assessment of reliability.

The area of the State of Florida that is within the FRCC Region is peninsular Florida east of the Apalachicola River. Areas west of the Apalachicola are within the SERC Region. The entire FRCC Region is within the Eastern Interconnection and is under the direction of the FRCC Reliability Coordinator.

On May 2, 2007, the FRCC executed an Agreement with NERC for the purpose of delegating to FRCC certain responsibilities and authorities as a Regional Entity as defined by Section 215 of the Federal Power Act; Federal Energy Regulatory Commission regulations and directives, and NERC Rules of Procedure.

Membership in the FRCC Regional Entity Division is open to any entity, without cost, that has a material interest in the reliability of the bulk power system in the FRCC Region. The FRCC is governed by a balanced stakeholder Board of Directors, and accomplishes its activities through standing committees which have a balanced stakeholder governance.

The FRCC provides the statutory functions and services for the FRCC Region through the Regional Entity Division. Non-statutory services for the FRCC Region are provided through the Member Services Division. This divisional structure provides an efficient means of clearly separating statutory and non-statutory activities as well as related funding for each. The revised FRCC Bylaws, creating this divisional structure, were approved by FERC on March 21, 2008. The statutory functions in support of the ERO and in the executed delegation agreement with NERC include:



- Active participation in the development of North American reliability standards for the bulk power system, and as needed development of reliability standards applicable within the FRCC Region.
- Active monitoring and enforcement of approved reliability standards, including the registration of responsible entities, and as needed certification of such entities.
- Assessment of the current and future reliability and adequacy of the bulk power system in the FRCC Region.
- Monitoring reliability performance and promoting improvement of reliability.
- Promoting continual training and education of system operators, and assisting in the certification of the system operators.
- Promoting situational awareness and protection of critical infrastructure.

## **I. Reliability Standards Development**

- A. Describe Regional Entity's activities and accomplishments in regional reliability standards development since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007.*

Prior to 1996, a series of operational and planning guidelines were published and maintained by the region. The FRCC has adopted these operational and planning guidelines (regional criteria) and established the FRCC Handbook. The maintenance of the guidelines is the responsibility of the FRCC Handbook Task Force with the FRCC Operating and FRCC Planning Committees retaining the responsibility for final approval of the documents. Although the FRCC Handbook guidelines are not subject to compliance monitoring, the "reliability based philosophy" within the region has resulted in voluntary adherence to the guidelines. The FRCC is currently pursuing the development of several Regional Reliability Standards. These Regional Reliability Standards are partly in response to the "fill-in-the-blank" nature of the associated NERC Reliability Standards and also based on the need to focus on concerns that are not currently addressed in the NERC Reliability Standards. However, as discussed below, several of the regional standards efforts have been placed on hold pending the outcome of related NERC standard development. Once the continent-wide standards are developed, FRCC will determine if the region needs to have a more stringent regional standard.

- PRC-002-FRCC-01 *FRCC Regional Disturbance Monitoring and Reporting Requirements*: The Standard Request was accepted in October 2006 by the Standards Process Manager and assigned to the FRCC Operating Committee (OC) and the FRCC Planning Committee (PC). The OC and PC accepted the Standard Request and formed the Standard Drafting Team (SDT) to develop a draft FRCC Regional Reliability Standard. There were three (3) postings in 2007 seeking

comments from industry participants. The project is currently 'on-hold' awaiting the completion of NERC Reliability Standard Development Project 2007-11 *Disturbance Monitoring*.

- PRC-003-FRCC-01 *FRCC Regional Analysis of Misoperations of Transmission and Generation Protection Systems*: The Standard Request was accepted in October 2006 by the Standards Process Manager and assigned to the FRCC OC and the FRCC PC. The OC and PC accepted the Standard Request and formed the SDT to develop a draft FRCC Regional Reliability Standard. However, a first draft was not posted due to questions surrounding NERC's work on a continent wide standard. Therefore, the project was placed 'on-hold' awaiting the completion of NERC Reliability Standard Development Project 2010-05 *Protection Systems*.
- PRC-006-FRCC-01 *FRCC Automatic Underfrequency Load Shedding Program*: The Standard Request was accepted in May 2006 by the Standards Process Manager and assigned to the FRCC OC and the FRCC PC. The OC and PC accepted the Standard Request and formed the SDT to develop a draft FRCC Regional Reliability Standard. The development of the standard is progressing in parallel with the NERC Reliability Standard Development Project 2007-01 *Underfrequency Load Shedding*. There have been eight (8) postings for comments from industry participants. The SDT is currently reviewing the comments received during the latest posting period. The expectation is to have the comments addressed and the resulting revisions to the draft standard completed and posted for comment during the third quarter of 2009. Balloting of this regional standard is anticipated before the end of the third quarter of 2009.
- PRC-024-FRCC-01 *FRCC Regional Generator Performance During Frequency and Voltage Excursions*: The Standard Request was accepted in May 2006 by the Standards Process Manager and assigned to the FRCC OC and the FRCC PC. The OC and PC accepted the Standard Request and formed the SDT to develop a draft FRCC Regional Reliability Standard. There have been five (5) drafts posted for industry participant comments but due to the close interrelation with the UFLS projects (regional and continent wide), the development of this standard has been placed 'on-hold' awaiting the completion of the FRCC Regional Reliability Standard Project (PRC-006-FRCC-01 *FRCC Automatic Underfrequency Load Shedding Program*) and the NERC Reliability Standard Development Projects 2007-01 *Underfrequency Load Shedding* and 2007-09 *Generator Verification*.
- Two other NERC Reliability Standards that are of the fill-in-the-blank nature are BAL-002-0 and PRC-012-0. FRCC will review the NERC activities in relation to the modification of these standards to determine the appropriate time to begin development (if needed) of supporting regional reliability standards.

FRCC staff has and will continue to actively provide support (i.e. committee chairs, co-chairs and members) to the NERC Standards Committee, associated Sub-Committees, and various standard drafting teams.

Since January of 2007 the FRCC has made the following improvements within the Regional Reliability Standards Department:

- During 2007 and most of 2008, the Reliability Standards Program was staffed by a combination of FRCC personnel. The FRCC had 0.9 FTE's budgeted in 2007 and increased to 1.55 FTE's in 2008. In August 2008 the Manager of Reliability Standards position was filled. This position has the primary responsibility for both FRCC Regional Reliability Standards development, and participating and following NERC Reliability Standards development activities.
- The FRCC Regional Reliability Standards Development Process was approved by FERC in their April 19, 2007 Order regarding the FRCC Delegation Agreement. In that Order FERC directed FRCC to modify its process so that all interested stakeholders, including those that are not FRCC members, may participate and vote on reliability standards. To carry out this directive, the FRCC modified its process by removing the Operating and Planning Committees approval steps and replaced it with approval of a Registered Ballot Body, similar in concept to the NERC process. This modified process was approved by the FRCC Board of Directors in September, 2007 and submitted to FERC as part of the October 30, 2007 Compliance filing, which was approved in a March 21, 2008 FERC Order.
- FRCC has automated certain elements of the FRCC Regional Reliability Standard Development Process. The resulting system, called the Registered Ballot Body System (RBBS), allows users to register as members of the FRCC Registered Ballot Body (RBB). The RBB is comprised of representatives from all market sectors as defined in the FRCC Bylaws, to provide balanced decision-making on FRCC Regional Reliability Standards. Future enhancements to the RBBS will allow RBB members to join ballot pools, and vote on proposed new and revised FRCC Regional Reliability Standards.
- The 'Standards' section on the FRCC website was enhanced to provide access to the FRCC Reliability Standards development procedures and associated documents and to track standards development.

Future plans in the Regional standards program area for continual improvement will include, but not be limited to, the following:

- The RBBS will provide access to the RBB roster, individual Ballot Pool rosters and Ballot Results.
- Enhancements to the 'Standards' section on the FRCC website include establishing the ability to submit comments via the web rather than through email.

- Continued participation on and commitment to the NERC Standards Committee, associated Sub-Committees and the NERC Regional Reliability Standard Working Group with the goal of establishing uniformity and consistency with the NERC continent-wide process and the other Regional programs.
- Closer interaction with FERC and NERC during Regional standards development to ensure all regulatory input is considered.
- FRCC stakeholders have indicated that more training on NERC standards is needed therefore the FRCC Standards Department will provide one (1) training seminar in 2009 and three (3) seminars in 2010.

*B. Explain how the Regional Entity has the ability to develop regional standards and has a standards development process that provides for openness, due process and balancing of interests.*

On October 23, 2007 the NERC Board of Trustees (BOT) approved for filing with FERC the revised FRCC Delegation agreement that included the FRCC Regional Reliability Standards Development Process Manual (dated: September 25, 2007) and subsequently on March 21, 2008 the FERC approved the procedure without condition. This manual establishes the process for the development, revision, withdrawal and approval of FRCC Regional Reliability Standards for the FRCC Region. Proposed FRCC Regional Reliability Standards shall be subject to approval by the NERC, as the ERO, and by the FERC before becoming mandatory and enforceable under Section 215 of the Federal Power Act. FRCC Regional Reliability Standards, when approved by FERC, shall be made part of the body of NERC Reliability Standards and shall be enforced upon all applicable bulk power system owners, operators and users within the FRCC Region, regardless of membership in the Regional Entity.

The FRCC Regional Reliability Standards Development Process is based on providing an open and fair process that ensures all interested and affected parties have an opportunity to participate in the development of FRCC Regional Reliability Standards. Any entity (person, organization, company, government agency, individual, etc.) with a direct and material interest in the reliability of the FRCC Bulk Power System has a right to participate by: (a) expressing a position and its basis, (b) having that position considered, (c) voting on proposed Regional Reliability Standards, and (d) having the right to appeal.

The 'Standards' section on the FRCC website was developed to provide stakeholders with an informative and user-friendly tool which emphasizes the FRCC's commitment to maintaining a standards development process that encompasses *due process, openness* and *balance*. The 'Standards Under Development' portion of the website was designed to provide a visual depiction of the progression through the regional standard development process and integrates direct hyperlinks to the following documents and forms:

- FRCC Regional Reliability Standard Request Form

- Proposed draft versions of the Regional Reliability Standard and the Implementation Plan
- Comment forms and the comments received during the applicable posting periods
- Standard Drafting Team responses to the submitted comments
- Supporting documentation and materials

The FRCC will continue to upgrade and expand the capabilities of the ‘Standards’ section of the FRCC website to facilitate the standard development process while incorporating the recommendations from NERC, other Regional Entities, the industry and various stakeholders.

The FRCC Regional Reliability Standards Development Process ensures a balance of interests by utilizing the ‘weighted sector’ voting process established by the FRCC Bylaws as approved by NERC and FERC, and included in the Delegation Agreement between NERC and the FRCC.

The FRCC, by establishing the Regional Reliability Standards Development Process, has developed the policies and procedures, along with the necessary tools to foster an effective and efficient program to develop regional reliability standards both at the direction of NERC as the ERO and also in response to reliability related needs identified by “other sources”.

*C. State Regional Entity’s assessment of its own effectiveness in reliability standards development since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.*

The FRCC has established a strong foundation on which to build a comprehensive Regional Reliability Standard Development Process that is responsive to the needs of NERC and FERC, the other Regional Entities and the Registered Entities within the region. The FRCC has initiated the development of four (4) Regional Reliability Standards in response to the ‘fill-in-the-blank’ nature of the associated NERC Reliability Standards and the need to focus on concerns that are not currently addressed in the NERC Reliability Standards. Three (3) of these four (4) Regional Reliability Standards have been delayed awaiting the completion of the related continent-wide standards. However, the FRCC is fully prepared to resume development of these Regional Reliability Standards, if necessary, once the continent-wide projects near completion.

Due to the fact that the FRCC has only administered the early stages of the standard development process on the above mentioned standards, it is difficult to fully assess the effectiveness of the process. However, the FRCC has recently made the following significant enhancements to improve the overall effectiveness of the reliability standards development process:

- Increased staffing within the Regional Reliability Standards Department
- Implementation of the RBBS
- Improved oversight of the SDT activities

- Enhancements to the ‘Standards’ section of the FRCC website

Based on the existing process and the recent improvements as outlined above, the FRCC believes that it is well positioned to initiate, develop and implement Regional Reliability Standards now and into the future.

*D. State any proposals of Regional Entity to improve its effectiveness in reliability standards development.*

The FRCC is continuously reviewing the current standard development process and benchmarking other regional standard development processes in an effort to identify additional areas of potential improvement. The FRCC is committed to establishing and maintaining an effective and efficient regional standards development process through due process, openness and balance.

The FRCC will continue to participate on the NERC Regional Reliability Standards Working Group (RRSWG) which is dedicated to sharing improvement ideas and establishing consistency in the standard development processes across the regions.

The FRCC will consider and evaluate the benefits of forming a regional Standards Committee to assist in oversight of the regional standards development process.

## **II. Organization Registration and Compliance Monitoring and Enforcement Program**

*A. Describe Regional Entity’s activities and accomplishments in OR/CMEP since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007.*

### Staffing

2007 was a year of transition in terms of compliance personnel. The two existing compliance staff employees took positions with another Regional Entity. These vacant positions were filled along with a new position, all in the first quarter. Essentially, all dedicated compliance staff were new this year. The staffing in 2007 consisted of a Manager of Compliance, Compliance Program Administrator and a Compliance Engineer. In addition to these dedicated staff, other FRCC staff helped support compliance activities in 2007 on an as needed basis for a total of 3.2 budgeted FTE’s.

In 2008, compliance staff consisted of a Manager of Compliance, two Compliance Program Administrators and three Compliance Engineers/Auditors. No other FRCC staff participated in any compliance program activities with the exception of the Vice President and Executive Director of Standards and Compliance. For 2009, compliance staff will add two additional Compliance Engineers/Auditors. An assessment for further staffing needs identified the need for three (3) additional staff for compliance and this addition is reflected in the 2010 budget as approved by the FRCC Board of Directors on June 10, 2009.

### Organization Registration

The FRCC began work on registering organizations in 2006. In December 2006, NERC established a schedule for the Regional Entities to follow with a final draft registration to be submitted on March 2, 2007. The FRCC followed the NERC Statement of Compliance Registry Criteria as its basis for including organizations on our registration list. The FRCC did include a number of organizations that owned or operated generators that were connected at 69kV because previous studies indicated they had a material impact to reliability of the FRCC Bulk Electric System (BES). NERC received several appeals of which all were upheld by the NERC Board of Trustees Compliance Committee. Several entities appealed at FERC, two of which were denied at FERC while the others were remanded for further review. Upon additional review, the FRCC removed two entities from the registration list in late 2007. The number of registered entities in FRCC in 2007 was 82.

In 2008, the FRCC performed a more in depth analysis of those generators that were connected at less than 100kV, and determined that due to changes in topography and other system conditions, these generators no longer had a material impact to the reliability of the FRCC BES and requested that NERC remove these entities from the registration list. FRCC now has 68 entities on the NERC Compliance Registry.

FRCC is committed to continue to utilize the NERC Statement of Compliance Registry Criteria and the NERC definition of Bulk Electric System as the basis for inclusion on the Compliance Registry and to ensure consistent registration with other regions. The FRCC will develop and implement an annual review process in 2009 to assist in ensuring the registry is complete and up to date.

### Compliance Workshops

The FRCC has held numerous workshops as a way to engage the Registered Entities within the FRCC and provide information and education about the Compliance Program.

Two workshops were held in the spring of 2007 (4/4 and 4/11) with a total of 135 attendees. The focus of these workshops was basic education about the compliance program. Topics included:

- NERC update
- Entity Registration
- Compliance Program Overview
- The 8 Monitoring Methods
- Remedial Action Directives, Penalties and Appeals
- Presentations from two (2) Registered Entities on what they were doing to build an internal compliance program

A comment form was requested from each participant to obtain feedback and learn what areas they were interested in for future workshops.

In 2008, the FRCC held two (2) workshops in the spring (4/8 and 4/9) with a total of 111 attendees and five (5) workshops in the fall (9/12, 9/19, 9/26, 10/7 and 10/10) with a total of 140 attendees. The spring workshops were very similar to those conducted in 2007 providing basic information about the compliance program. However, the fall workshops were very different and were split into two sessions each day.

The morning session focused on training for the new Web based application that the FRCC has implemented for reporting and tracking. This was geared towards the Registered Entity personnel who will be the Master Account Administrator. The afternoon session was focused on areas where the Registered Entities indicated a need for more information. The topics included:

- Preparing for an audit
- Quality of Evidence
- Problem areas and update on penalty assessment
- Reliability Standards Development

The feedback the FRCC received from the participants of the fall workshops was very positive. They were very pleased to have information to help them understand what is being sought during audits and investigations in terms of quality evidence. The FRCC plans to continue to provide this kind of education to the Registered Entities in future workshops.

The FRCC 2009 Spring Compliance Workshop consisted of five (5) one-day sessions held on 5/1, 5/8, 5/14, 5/15, and 5/18, with approximately 140 total attendees. During each session, there was an update on the Compliance Tracking and Submittal (CTS) portal. NERC Staff gave presentations on CMEP updates and CIP Program perspectives. In addition, representatives from two (2) Registered Entities shared their experience with NERC Reliability Standard PRC-005 and with preparing for a compliance audit. Finally, FRCC Staff spoke on standards development, updates to the Implementation Plan, mitigation plan preparation, and enforcement activities.

Attendees provided very positive feedback on the spring workshop. The presentation on PRC-005 received particularly favorable comments. The discussion during enforcement topics gave valuable insight into the settlement process. Their feedback and suggestions will be used in developing FRCC's fall conference call / WebEx forums. Compliance and process updates will also be communicated during these forums.

#### On-site Compliance Audits

During 2007, the FRCC completed five (5) on-site Compliance Audits. This included audits of Florida Power & Light, Progress Energy Florida, Kissimmee Utilities Authority, Lakeland Electric and the City of New Smyrna Beach.



During 2008, the FRCC completed four (4) on-site Compliance Audits. This included the City of Homestead, JEA, Reedy Creek Improvement District and Tampa Electric Company.

For 2009, the FRCC has sixteen (16) on-site Compliance Audits scheduled. This will be the first year to incorporate audits of Registered Entities that are not also BA's, TOP's and RC's.

During the on-site Compliance Audits, the FRCC audit teams are divided into two sub teams. The standards included in the audit are then assigned to the sub teams based on areas of expertise.

After each audit the Compliance Staff conducts a lessons learned session with the objective of continuing to improve the consistency, thoroughness, and efficiency of the audit process. The audits conducted in 2007 and 2008 utilized industry volunteers as part of the audit team makeup. For 2009, the audit teams are planned to be composed entirely of FRCC Compliance Staff, however, this is being reevaluated as we assess needs for subject matter experts, particularly in the Critical Infrastructure Program area.

#### Spot Checks Reviews

The FRCC has developed and implemented a procedure for conducting Spot Checks of its Registered Entities that are subject to the FRCC Compliance Monitoring and Enforcement Program (CMEP). The FRCC Compliance Staff selects Reliability Standards based on covering all Registered Entity functions and those that may have more impact on the reliability of the FRCC Bulk Power System.

During 2007 the FRCC Compliance Staff selected the following NERC Reliability Standards for the Spot Check Review: PER-003-0 and TPL-002-0. This Spot Check review was done prior to mandatory enforcement of standards.

During 2008 the FRCC Compliance Staff selected the following NERC Reliability Standards for the Spot Check review: FAC-003-1, PRC-005-1, VAR-001-1 and VAR-002-1. These standards were selected by the FRCC for this Spot Check review because of the risk to the BPS associated with these standards and/or to assure that all entities in the FRCC would be monitored to some level unless intentionally excluded as mentioned above. This Spot Check review impacted all registered entities in the FRCC region that did not receive an on-site Compliance Audit in either 2007 or 2008. This Spot Check review included a total of 115 bodies of evidence.

For 2009, the NERC Compliance Implementation Plan provided more specific direction to what Reliability Standards should be monitored via Spot Check reviews. The FRCC will follow the directions provided by NERC and will consider additional needs for Spot Checks as situations arise.

#### Self Certification

Self Certification is performed on an annual basis. The timeframe for self certification is typically in the 4<sup>th</sup> quarter of the year. The request for self certification normally goes out to all Registered Entities in early November with their data due by mid-December. All Registered Entities participated in the annual self certification process for 2007 and 2008.

In addition to the annual self certification, the FRCC conducted the CIP-002 through CIP-009 self certification in July of 2008 and January 2009 as required by the NERC CIP Guidance document on the CIP Implementation Plan. Based on direction provided by FERC, the FRCC will implement additional semi-annual self certifications of CIP standards in 2009.

### Hearings

The FRCC has established its Board of Directors Compliance Committee as the Hearing Body. In addition, the FRCC has entered into agreements with several Hearing Officers should a Hearing be requested. To date, the FRCC has not had any requests for Hearings.

### Enforcement Activities

Summary of the number of violations assessed and processed in 2007, 2008 and 2009 to date.

<b>Violation Timeframe</b>	<b>Number of Possible Violations Reviewed</b>	<b>Number of Violations With Sufficient Basis</b>	<b>Notices of Alleged Violation Filed (#Violations)</b>	<b>Notices of Confirmed Violation Filed. (#Violations)</b>	<b>Number of Violations Complete</b>
2007 Pre-June 18	470	388	N/A	N/A	373
2007 Post-June 18	59	56	53	49	2
2008	98	80*	6	6	0
2009 YTD	40	39*	0	0	0

\*Note: Ninety (90) violations are presently in settlement discussions.

Summary of the number of mitigation plans processed to date.

<b>Mitigation Plan Timeframe</b>	<b>Number of Violations with Mitigation Plans Submitted</b>	<b>Number of Violations with Accepted and Approved Mitigation Plans</b>	<b>Number of Violations with Mitigation Plans Certified as Complete</b>	<b>Number of Violations with Mitigation Plans Verified as Complete</b>
2007 Pre-June 18	388	386	386	357
Post-June 18, 2007 TD	175	162	122	108

*B. Describe how the Regional Entity has the ability to enforce reliability standards and to provide for an adequate level of bulk power system reliability in its Region.*

The FRCC has authority to enforce Reliability Standards through a FERC approved Delegation Agreement with NERC. The FRCC CMEP, which closely follows the NERC uniform CMEP, is part of the FRCC Delegation Agreement. The FRCC follows the Delegation Agreement and its Exhibits and the NERC Rules of Procedure in enforcing compliance to Reliability Standards.

The FRCC Compliance Staff is committed to the full implementation of the FRCC CMEP and follows the NERC Rules of Procedure and guidance provided by NERC staff and FERC staff. The FRCC compliance department is almost fully staffed (per 2009 budget) and even while operating with vacant positions, was able to carry out its enforcement activities to provide for an adequate level of reliability for the Bulk Power System in the FRCC. In 2009, the FRCC will continue to seek highly qualified individuals to complete our staffing needs and identified the need for three (3) additional staff which is reflected in the FRCC Board of Directors' approved 2010 budget. The FRCC has developed internal procedures that allow the Compliance Staff to implement the program in an independent, efficient and effective manner.

The FRCC Compliance Staff (with the exception of the administrative positions) attended the lead auditor training held by NERC and also the web based training sponsored by NERC. All of the FRCC Compliance Staff have completed the NERC web based compliance training modules. Five (5) of the Compliance Staff attended a training session held by FERC on conducting investigations. In addition, NERC-provided training on the monitoring and enforcement of the CIP standards will be completed by most of the Compliance Staff by the end of the second quarter 2009. The FRCC will continue to seek additional training to improve the effectiveness and skills of its Compliance Staff.

The Regional Entities have formed several groups to share information and best practices as they relate to the implementation of the CMEP. The FRCC Compliance Staff participates in the Regional Entity Compliance Implementation Group (RCIG) and its

associated working groups. The primary purpose of this group is to foster coordination and cooperation and improve consistency among the regions. The FRCC also participates in the Regional Entity Management Group (REMG) whose members are the chief executives of each region and oversee all program areas, including compliance enforcement.

*C. Describe how the Regional Entity has fair and impartial procedures for enforcing reliability standards.*

All FRCC employees are expected to perform their responsibilities with the highest ethical standards. The FRCC Compliance Staff act independently of all other departments within the FRCC. They work with NERC Compliance Staff and the other Regional Entity Compliance Staff to implement the compliance program activities in the most consistent manner possible. They are not allowed to have interests in outside businesses which conflict or appear to conflict with their ability to act and make independent decisions in the best interest of FRCC and the reliability of the bulk power system. The FRCC Personnel Policy Manual outlines these expectations of all employees. In addition, each year all employees are expected to review and sign a Recital and Disclosure document to verify they have reviewed the policy and are meeting the policy requirements. If any conflicts of interest do exist, the FRCC Compliance Staff member will be recused from performing monitoring and enforcement activities with the conflicted entity.

The FRCC Compliance Staff offices are located in offices that are separate and apart from the rest of the FRCC staff. The Compliance Staff do not discuss any confidential compliance matters with employees outside of the compliance organization. They are committed to performing their responsibilities in an independent manner.

NERC staff provides oversight of FRCC compliance activities and provides a level of review above and beyond any internal review. The FRCC Compliance Staff follows the FRCC CMEP (which closely follows the NERC uniform CMEP) and NERC Rules of Procedure, and discloses to all Registered Entities the members of audit and review teams in order to provide opportunity to Registered Entities to review participation for any conflict of interest concerns. The FERC-approved NERC and FRCC CMEPs contain fair and impartial procedures for monitoring and enforcing compliance with reliability standards. In addition, FRCC Compliance Staff members that have worked previously for a Registered Entity within the FRCC Region are not allowed to participate in any compliance enforcement activities related to that Registered Entity for a period of two (2) years.

The FRCC Member Services Division is registered on the NERC Compliance Registry for two reliability functions, the Planning Authority (PA) and Reliability Coordinator (RC). NERC is currently the compliance enforcement authority and is responsible for monitoring and enforcing compliance to all standard requirements that FRCC is responsible for as a PA and RC.

*D. State Regional Entity's assessment of its own effectiveness in OC/CMEP since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.*

The effectiveness of the FRCC in enforcing compliance to reliability standards has greatly improved since the beginning of 2007. This has occurred with the addition of competent and experienced staff, development of internal processes and tools, and the Registered Entities' increased knowledge of the Reliability Standards and expectations for verifying compliance.

The FRCC received a great number of self reported violations prior to June 18, 2007. This number of self reports was much more than anticipated and also more than experienced by several of the larger regions. With our staffing challenges in 2007 and into 2008, and the continued work demanded by ongoing compliance activities, a "backlog" of processing violations and associated mitigation plans developed. The FRCC Compliance Staff has diligently worked in 2008 to reduce this backlog; however it is not expected to be eliminated until the end of the second quarter 2009. FRCC has sought out help in the form of additional loaned manpower from NERC and other regions. SERC assisted the FRCC in this reduction effort by providing members of the SERC Compliance Staff during the first quarter of 2009.

The FRCC does not expect a situation like this to occur again in the future for several reasons. The FRCC has increased staff to our full complement for 2008 and is in the process of filling one (1) vacant budgeted position for 2009. While self reports by Registered Entities are still expected and desired, it is highly unlikely that a large number of self reports will come in at the same time as occurred prior to mandatory enforcement.

The FRCC has been working on improving tools and processes and has implemented a web based compliance reporting and tracking system. Five (5) other Regional Entities have implemented this same tool and together have formed a Consortium User Group to collaborate and share resources for the development, modification and maintenance of this tool. NERC is currently in the process of implementing a web based application (from the same vendor) that will be able to interface with the Regional Entity application, thus providing a much more efficient and accurate mechanism for the transfer of data.

FRCC is committed to improving the processing time of audits and violations.

*E. State any proposals of Regional Entity to improve its effectiveness in OC/CMEP.*

The FRCC believes that the best way to improve its effectiveness in compliance enforcement and organization registration is through the continued collaboration of the Regional Entities and NERC. The Reliability Standards have been mandatory for two (2) years; however, the compliance enforcement process is still relatively new to both the Regional Entities and the Registered Entities. Additional time is needed to improve the Reliability Standards to provide greater clarity and understanding. The FRCC will strive to provide increased opportunities for education to the Registered Entities since

improvements in compliance are evident once more clarity is provided on what is expected of the Registered Entity to demonstrate compliance through quality evidence. The FRCC has purchased a document management system that it plans to utilize in the compliance area for storing and retrieving electronic files in a more efficient manner.

There have been numerous questions surrounding the inclusion of generators in the NERC Compliance Registry. FRCC faced several issues surrounding these questions as described earlier in this assessment. The FRCC believes improvement in reliability could be made as well as the elimination of confusion and inconsistency in registration criteria, if NERC would consider requiring all generators with nameplate ratings greater than 20 MVA, regardless of connection voltages to be included in the NERC Compliance Registry.

Through the implementation of the CMEP, several areas have been uncovered that need review and consideration by the Regional Entities, NERC and FERC. These areas present the possibilities for revision to the NERC Rules of Procedure (ROP) and the CMEP itself. The two primary areas of concern include:

- **Data Retention:** there are words in the CMEP (Section 3.1.4) that state that compliance audit scope will be defined by the data retention terms identified in the reliability standard. In many cases, the data retention terms conflict with the implementation plan language stating that audit scope will include the current and three previous years. As we implemented the CMEP in 2008 and 2009, NERC's expectation for the audit scope was to review evidence back to June 18, 2007, and many of the data retention requirements in the standards do not support this. The Registered Entities and the Compliance Staff are unclear as to what is enforceable in terms of the time period monitored (audit scope) with this conflict. Revisions to the CMEP, ROP, Reliability Standards and or implementation plans are needed to eliminate inconsistency between the expectations that the audit scope covers a time period that can be different than the data retention requirement of the standards.
- **CIP Information:** there have been several Registered Entities that have expressed concern that if they turn over their critical infrastructure documentation to Compliance Staff, that they will violate their own procedures that are developed to comply with several CIP standards. If their internal programs require a certain criteria for granting access to information, they believe that Compliance Staff must follow that criteria or they would be held in violation since they did not follow their own program. Review needs to be made of this potential conflict with some resolution so that Compliance Staff is not subject to many different sets of internal review processes and have access to the information they need to determine compliance. The Registered Entities need to be given some assurance that they will not be held in violation if they provide critical infrastructure documentation to FRCC Compliance Staff for compliance monitoring purposes and by doing so do not follow their own internal processes.

### III. Other Program Areas

#### A. Reliability Readiness Evaluation and Improvement Program

1. *Describe Regional Entity's activities and accomplishments in Reliability Readiness Evaluation and Improvement since January 1, 2007, including discussion of improvements in this area.*

The NERC Readiness Program, which was initiated to ensure balancing authorities, transmission operators, and reliability coordinators were ready to perform under emergency conditions, has had evolving goals since its original inception. The program focus has shifted to promoting organizational excellence in performing assigned reliability functions and responsibilities. The current program goals are based on the recognition that Reliability Standards may lag behind the current developments in reliable operations and that historically, NERC standards have presented a threshold, not necessarily a target, for performance to the industry.

The NERC Readiness Program evaluations were designed to ensure that operators of the bulk power system have the tools, processes, and procedures in place to operate reliably and ensure that operating entities recognize and assess their reliability responsibilities and evaluate how their operations support those responsibilities.

To that end, the FRCC has found that the resulting evaluations along with the regional tracking process foster and enable organizational focus on continuous improvement of established operations and continued organizational focus on reliable interconnected operations.

2. *State Regional Entity's assessment of its own effectiveness in Reliability Readiness Evaluation and Improvement since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.*

In previous years, the FRCC has supported all facets of the NERC Readiness Program implementation and continued to do so in 2007 and 2008. In 2006 the FRCC developed procedures and a database in support of the program and to track recommendations received by entities within the Region. Since that time, the FRCC has reviewed and tracked actions taken in response to recommendations on a quarterly basis in support of NERC's overarching program tracking initiative. In 2007, the FRCC hosted five (5) Readiness Evaluations including evaluations of four (4) registered BA/TOP entities as well as one (1) registered TOP only evaluation. In 2008, the FRCC hosted six (6) Readiness Evaluations including, evaluations of three (3) registered BA/TOP entities as well as three (3) registered TOP only evaluations. FRCC supported the program by providing at least two (2) FRCC staff members and two (2) Regional volunteer

auditors (peer review) for four (4) days during most of these evaluations as well as the time and resources required to review evaluation reports.

The FRCC continues to perform internal subcommittee reviews of final Reliability Readiness Evaluation report recommendations to assess the appropriateness of entity responses to each recommendation as well as to look for potential opportunities for developing Regional best practices or guidelines. The FRCC staff will continue to track each recommendation received within the Region to its ultimate resolution. This process and database will continue to be used to support the NERC reporting requirements regarding Readiness Evaluation Recommendations including the transition and phase out of the program that has been proposed by NERC.

To date, the FRCC has successfully improved the internal processes supporting the Readiness Programs and resulting evaluations to leverage the most benefit from this NERC program for the reliability of the Region. The FRCC has also been successful (as of December 2008 ) in having all of its BA, TOP and RC Registered Entities evaluated for readiness at least once with many having been evaluated more than once. The FRCC has also been successful in using the program to provide valuable experience to familiarize members of the FRCC Compliance Staff with the overall make-up and operational topology of the Region.

Even though the program is being phased out, FRCC staff will continue to actively track implementation of the resulting recommendations, on a quarterly basis until actions on all recommendations (within the Region) have been completed. Although, the FRCC will continue to provide staff support to coordinate the transition and closeout of the NERC Readiness Evaluation Program in 2009, the phase out of the program will have minimal impact on FRCC staff and will free up some resources to better support the FRCC CMEP.

3. *[Discussion of proposed improvements not needed, since this program is being phased out in the first quarter of 2009.]*

## **B. Training, Education and Operator Certification**

1. *Describe Regional Entity's activities and accomplishments in Training, Education and Operator Certification since January 1, 2007, including discussion of improvements in this area.*

The FRCC System Operator Subcommittee (SOS) identifies and coordinates NERC and Regional training activities for the FRCC System Operators. The SOS provides annual



training seminars for the bulk power system operating personnel, operations support personnel (engineering and information technology), supervisors and managers, training personnel and any others that are responsible for compliance with NERC and FRCC Reliability Standards.

#### 2007 FRCC System Operator Seminar

In 2007, the FRCC SOS conducted the annual training seminars over a three-week period, with two days each week for training. FRCC staff requested input from the system operators as to which topics were of the most value to them. Their responses were consolidated and forwarded to the FRCC SOS for review during the planning stages. The FRCC staff, on behalf of the SOS, forwarded a Request for Proposal to several prospective vendors for the training to be offered on the first day of the seminar. SOS met with a selected group of vendors and carefully deliberated during the process, to select the vendor which very closely matched the subcommittee's request.

The 2007 training seminars involved a vendor for the first day, and FRCC members or industry volunteers who participated as presenters for the second day. The topics covered by the vendor on the first day included *Reliability Software – What it Does, Transmission Issues and SOL – IROL, Voltage Collapse Issues and Situational Awareness*. Day 2 topics presented during the morning session by FRCC staff members and industry volunteers, included *NERC & FRCC Reliability Standards, FRCC & NERC Compliance Introduction, and Florida Transmission Messaging System (FTMS) Training*. The afternoon session of the seminar was for the FRCC Reliability Only Group members (no marketers or non-members were allowed to attend). These topics included the *FRCC Reliability Coordinator Transmission Tools and FRCC Capacity Emergency Plan*. Attendees to the seminars received a FRCC binder that included copies of the presentations that were given.

Approximately 165 certified system operators, as well as engineers and operations support personnel were trained during the 2007 FRCC System Operator Seminars. All attendees to the seminar completed a seminar evaluation form which provided an opportunity to rate the presentations, clarity of handouts and on-screen presentations (excellent to unacceptable). They also suggested topics for future seminars and stated any specific likes or dislikes they had about the vendor and FRCC courses / seminar. This information was compiled and reviewed by the FRCC SOS members following the seminar, and again when preparing for the next year's seminar.

The FRCC is a NERC-approved Continuing Education Provider and offered six (6) CEHs for the second day training session for those certified system operators who successfully completed the training requirements.

#### 2008 FRCC System Operator Seminar

The FRCC staff, on behalf of the SOS, forwarded a Request for Proposal to several prospective vendors, for the training to be offered on the first day of the 2008 seminar.

SOS met with a selected group of vendors and carefully deliberated during the process, to select the vendor which very closely matched the subcommittee's request. The SOS members worked very closely with the vendor to ensure that the subcommittee's desires were clearly understood. It was imperative to the SOS that the training be very interactive and include EOP hours and simulation training.

The 2008 annual seminars brought in over 210 certified system operators, operations support personnel, engineers, managers and supervisors for training. Many of these attendees indicated that the ever-changing industry challenges necessitated their attendance at the seminars. The attendees were very receptive to the training offered by the vendor. Laptop computers were used for the simulation exercises which gave the attendees a better understanding of what was presented and what was expected of them during the exercises. The topics covered by the vendor on the first day included *Situation Analysis and Decision Making, Power Simulator Overview, Voltage Collapse and Stability, and Disturbances / Blackouts – Analysis and Restoration*.

The topic covered during the morning on the second day was *Basic Relaying*, and was presented by industry volunteers. The afternoon session of the second day included *Special Protection Schemes* and the *2008 Summer Assessment*. Again, the afternoon session was only available to the FRCC Reliability Only Group members. The marketers and out-of-region attendees were asked to leave following lunch. FRCC offered seven (7) CEHs for the certified system operators who successfully completed the training requirements.

#### 2008 FRCC Event Analysis Team (FEAT) Recommendation Training

Also in 2008, the FRCC SOS was directed to develop a two-hour NERC approved Individual Learning Activity for the *FRCC Regional Voice Communications Procedure* and the *Relay Outage Coordination Procedure*. The SOS also included the *FRCC Generator Coordination Requirements* document, which was a recommendation of the FEAT. Twenty (20) entities reported their participation in this training. The FRCC was pleased to report that 523 personnel in the FRCC region were trained on these policies, which included 200 certified system operators.

#### 2009 FRCC System Operator Seminar

At the request of the FRCC System Operator Subcommittee (SOS), FRCC staff forwarded a Request for Proposal to several prospective vendors, for training offered on the first day of the 2009 seminar. Once the proposals were received, SOS members met with a selected group of vendors and carefully deliberated during the process, to select the vendor which very closely matched the subcommittee's request. The SOS members worked diligently with the selected vendor to ensure that the subcommittee's expectations were clearly communicated and understood. It continues to be imperative to the SOS members that any training offered by a vendor must include EOP hours and simulation training, and must include interactive exercises.

The 2009 annual seminars, held over a five-week period, brought in over 225 attendees, including certified system operators, operations support personnel, engineers, managers and supervisors for training. Many of the certified system operators indicated that the ever-changing industry challenges necessitated their attendance at the seminars. The topics covered by the vendor on the first day included *System Restoration and Blackstart*. The attendees were very receptive to the interactive training provided by the vendor. Laptop computers were available at each table for use during the simulation exercises. The attendees were presented with varying scenarios, of which each scenario included a simulated islanding event. They were all told to take good notes and were not able to use the energized island to build from but had to blackstart and build the rest of the system before they were allowed to synchronize the islands together. To give the operators a “real-time” experience, the vendor incorporated a “shift-change” during the restoration exercises wherein they had to all change places with other groups. This showed the operators the importance of good note taking.

The morning of the second day began with a presentation of the “*Changing Regulatory Environment*” giving the attendees a better understanding of what they should expect on an on-going basis. Morning presentations also included the “FRCC Policies and Procedures 2009” - *Relay Outage Coordination and Generator Coordination / NERC Reliability Standard PRC-001-1*. Also included was the FRCC Voice Communication Protocol, a training program developed for all FRCC operators that are involved in issuing and receiving directives with regard to bulk electric system reliability.

The afternoon session of the second day included a presentation on the new *Florida Reserve Sharing Group (FRSG)*. Following that presentation, the balance of the afternoon session was only available to the FRCC Reliability Only Group members. The marketers and out-of-region attendees were asked to leave following the FRSG presentation. FRCC offered five (5) CEHs for the “FRCC Policies and Procedures 2009”, applicable to NERC Standards Operating Topics and Emergency Operations. FRCC also offered two (2) CEHs for the “FRCC Reliability Process”; these hours were applicable to Operating Topics and NERC Reliability Standards. CEHs were granted for the certified system operators who successfully completed the training requirements.

Comments received during the 2009 System Operator Seminars indicated that this year was the best in many years and that the interactive simulation exercises were a much more effective method of learning and hands-on training.

2. *State Regional Entity’s assessment of its own effectiveness in Training, Education and Operator Certification since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.*

It was noted during the 2007 System Operator Seminars, that the class sizes each week were too large for the effectiveness SOS members were hoping to attain. This was addressed in 2008 when the FRCC SOS offered the training over a four-week period, anticipating smaller classes. Attendance was higher than expected in 2008 and class size

was still a concern to the SOS. In speaking with training representatives throughout the region this year, it is anticipated that attendance in 2009 will be higher than 2008. Because of this, the FRCC SOS hosted the 2009 seminars over a five-week period. This enhanced learning due to the smaller class size and gave the system operators better scheduling options.

The FRCC SOS has also minimized any issues that may be faced each year in the various training endeavors, by continuing to host the annual seminars at the same hotel each year, centrally located to FRCC members. The staff of this hotel knows the needs of the FRCC SOS and these seminars, and has exceeded our expectations each year.

3. *State any proposals of Regional Entity to improve its effectiveness in Training, Education and Operator Certification.*

The FRCC SOS continually strives to improve the training seminars each year and has found that interaction among the attendees is a very vital part of a successful seminar. The SOS will work closely with any prospective vendor to ensure that the program they present will be the most beneficial to our system operators. SOS will rely on input received from system operators when planning the next year's seminar.

**C. Reliability Assessment and Performance Analysis Program**

The FRCC Regional Entity's activities focus on maintaining reliability through the continuous improvement of processes, procedures and tools aligned to ensure resource adequacy and a robust transmission system. By improving processes, procedures and tools, a more thorough analysis reflecting the reliability of the BES can be incorporated into the reliability assessment. Since January 1, 2007, there have been many improvements in the area of reliability assessment discussed below.

1. *Describe Regional Entity's activities and accomplishments in Reliability Assessment and Performance Analysis since January 1, 2007, including discussion of improvements in this area.*

The FRCC Region annually performs a Load and Resource Reliability Assessment. This reliability assessment includes a review of the Reserve Margin and resource adequacy criteria. In addition, a load forecast evaluation is performed to review assumptions and uncertainties in forecast weather and economic conditions. An integral part of this assessment is fuel reliability where significant improvements have been achieved since January 1, 2007.

The FRCC formed a Fuel Reliability Working Group (FRWG) in 2007 based on a joint recommendation by the FRCC Operating Committee (OC) and the Planning Committee (PC). The FRWG was formed because the FRCC recognized that understanding fuel availability and its possible impacts on reliability was a key element needed to understand electric generation interdependency and improve fuel coordination, communication and awareness to adequately respond to fuel issues and emergencies.

FRWG oversees ongoing natural gas studies focusing on identifying natural gas availability following selected natural gas infrastructure outages. These studies provide valuable information to generator owners and operators that can help establish processes and procedures to proactively prevent loss of electrical generation due to potential fuel disruptions. The FRCC developed fuel reliability coordination plans in 2007 consistent with FERC Order 698 to improve coordination between natural gas and electric industries. These fuel reliability coordination plans were approved by the OC in October of 2007. In addition, the FRCC developed a Generating Capacity Shortage Plan identifying specific actions and notifications associated with fuel issues which was adopted by the Florida Public Service Commission (FPSC) in 2008.

The FRCC performs annual regional transmission reliability assessments and/or studies that include summer and winter Seasonal Assessments, Long Range Transmission Study, Inter-Regional Transmission Study and resource deliverability evaluations. Since January 1, 2007, the FRCC has continually improved internal procedures and developed tools to facilitate the performance and evaluation of the transmission system by consolidating study results and facilitating the coordination of responses from entities in the compilation of these assessments and/or studies. In addition, the PC approved a formal resource deliverability evaluation process in 2008 focused on the interconnection and integration of new resources as well as the evaluation of transmission service requests. This resource deliverability process allows for open participation and coordination of transmission issues related to a specific request.

2. *State Regional Entity's assessment of its own effectiveness in Reliability Assessment and Performance Analysis since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.*

The FRCC's effectiveness in Reliability Assessment and Performance Analysis has improved since January 1, 2007. The improvement of existing processes and procedures has increased the effectiveness of communication and coordination among FRCC members by facilitating discussions and information exchange on major topics related to reliability. The effectiveness of Performance Analysis has improved due to the enhancement and development of tools focused on improving the quality of data, reports and documents of various assessments and/or studies related to the reliability of the BES.

3. *State any proposals of Regional Entity to improve its effectiveness in Reliability Assessment and Performance Analysis.*

The FRCC expects to continue improving its effectiveness in Reliability Assessment and Performance Analysis by identifying improvement possibilities within existing processes and procedures as well as the development of new processes and procedures as needed. The FRCC expects to develop informational databases and associated tools to assist in data management which should improve the effectiveness of Performance Analysis.

## **D. Situational Awareness and Infrastructure Security Program**

*1. Describe Regional Entity's activities and accomplishments in Situational Awareness and Infrastructure Security since January 1, 2007, including discussion of improvements in this area.*

In 2007 the FRCC re-evaluated its tools and processes supporting the Reliability Coordinator function which resulted in shifting some of these functions to the Member Services Division because the functions support the non-statutory Reliability Coordinator function, not the Regional Entity Situational Awareness function. However, the FRCC Regional Entity Division does have a limited set of tools for use that include a satellite phone and access to daily capacity and transmission information. The FRCC Region has a single Reliability Coordinator and the FRCC Member Services Staff is able to work closely with its Reliability Coordinator agent to support the NERC/Regional Entity Situational Awareness Communication Team initiative. Beginning in mid 2007, FRCC staff worked in conjunction with NERC and the other Regions to develop a "Daily Report" template that was to be supplied to NERC, FERC and the Regions in an effort to greatly increase the situation awareness of all the organizations regarding the Reliability Coordinators and their anticipated operating conditions for the coming day. The template was developed as a common platform across the Regions and was reviewed by various groups including the Reliability Coordinator Working Group (RCWG) at NERC as well as FERC Office of Reliability staff. The template was field tested in March of 2008 and was officially started for the FRCC with submittals directly to FERC in July, 2008. The Daily Report is currently submitted to FERC, NERC and FRCC Regional Entity on a daily basis (weekdays) and greatly enhances the situational awareness regarding the anticipated operating conditions for the RC footprint for the coming day.

*2. State Regional Entity's assessment of its own effectiveness in Situational Awareness and Infrastructure Security since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.*

The FRCC OC, which develops and monitors a budget made up of both statutory and non-statutory functions, relies on a hierarchy of subordinate committees, working groups and agents to achieve its regional reliability goals. The various reliability roles and functions are coordinated and monitored in accordance with the FRCC Reliability Process document and through established FRCC organizational processes and procedures. Two of the primary reliability goals of the FRCC OC are continuous improvement in the situational awareness of the operators interconnected within the FRCC and ensuring that adequate physical, operational and cyber security objectives are in place for the Regions' shared communications networks.

In addition, in early 2008 the FRCC Regional Entity Division was successful in working with the FRCC OC and its Reliability Coordinator (RC) agent, in developing a wide-area view display that showed the major transmission lines within the FRCC RC footprint as well as the major interconnection tie points along the northern interface. That screen, along with required confidentiality protections, had been developed and executed and were being provided directly from the RC agent to the FERC Office of Reliability,

Reliability Monitoring Center (RMC). This provided near real-time situational awareness information regarding the FRCC system directly to FERC.

In late 2008, the FRCC Regional Entity Division continued its support of NERC's situation awareness initiatives by being an active participant on the *Situation Awareness for FERC, NERC, and the Regions (SAFNR)* project. FERC, NERC, the staff from the eight REs (WECC, TRE, SERC, NPCC, MRO, RFC, SPP, and FRCC), and representatives from the U.S. RCs have worked together to implement a situation awareness and visualization project to provide near real-time information to FERC, NERC, and RE staffs. The project team was named SAFNR with a goal of the project being, to enable RCs in the United States to voluntarily provide overview displays of Interconnection system conditions to the FERC, NERC and the appropriate Regional Entities. This is being accomplished through internet-based systems that provide visual displays of the RCs geographic footprints with common core data sets. This enables FERC, NERC, and the REs to have access to near real-time system conditions, while all the relevant data actually resides on the hosting RC servers. As of June 1, 2009, the FRCC RC began providing a new situation awareness data set to FERC which included the SAFNR core data set. As of June 5, 2009 the FRCC RC began providing access to the SAFNR displays to both NERC and the FRCC Regional Entity as well. The current displays are static and refreshed every 60 seconds, and have been implemented as an interim step until the permanent SAFNR solution is implemented later on in the summer of 2009. Overall, since January 1, 2007, the FRCC Regional Entity has dramatically improved not only its situational awareness of the BPS but the awareness for NERC and FERC as well.

3. *State any proposals of Regional Entity to improve its effectiveness in Situational Awareness and Infrastructure Security.*

In early 2008, the FRCC OC also established a permanent Critical Infrastructure Protection Subcommittee (CIPS) as a forum for dissemination of CIP information. The FRCC RE will continue to provide staff support as a liaison to enable rapid dissemination of NERC Infrastructure Security Program information (Alerts, Bulletins, etc.) through its NERC Alerts program as well as NERC's CIPC activities. Going forward the FRCC will continue to support NERC's Infrastructure Security Program Objectives by providing staff support to activities that enable the continuous improvement of the situational awareness of the operators interconnected with the FRCC as well as by monitoring the activities of the Electricity Sector Information Sharing and Analysis Center (ES-ISAC) operations. Some of these activities may include CIP workshops facilitated by the RE and made available to all FRCC Registered Entities. The FRCC will also directly ensure that adequate physical, operational and cyber security objectives are in place for the FRCC's shared communications networks.

The FRCC Regional Entity will continue to work with the FRCC OC and RC agent to develop the permanent server and software solution for the FRCC SAFNR project data which will provide additional flexibility in presenting the SAFNR data to outside users

by allowing users to have a more dynamic display interface that allows for viewing data trends and more detailed information. The Regional Entity will also continue to support NERC's other situational awareness initiatives including, participation in bi-weekly situation awareness conference calls, event reviews and the event categorization efforts being undertaken by NERC Event Analysis. The FRCC Regional Entity will also continue to formalize the situational awareness information dissemination process between registered entities, Regional Entities, NERC and FERC and also promote the new web-based NERC Alerts processes to ensure registered entities are receiving relevant security or critical information from NERC in a timely manner.

## **E. Budgeting**

1. *Describe Regional Entity's activities and accomplishments in the development and submission of its annual business plan and budget, beginning with the 2007 business plan and budget.*

The FRCC has continued to make improvements in the development and submission of its annual business plan and budget since 2007. The development of the 2007 business plan and budget was a learning experience for the FRCC since it became apparent that many improvements needed to be made in the accounting functions of the FRCC. Specifically, in 2007, there was no infrastructure in place to support the reporting of actual cost to budget, there was no financial reporting system set up, and many of the accounting functions were not automated. Since the development of the 2007 Business Plan and Budget, the FRCC hired in June 2007 all new accounting staff who immediately implemented the installation of new software for reporting and accounting, customized and automated financial reports, implemented the NERC chart of accounts and developed a system for cost accounting that included using detailed time sheet reporting.

The FRCC 2008 Business Plan and Budget was developed and finalized by June 22, 2007. However, many of the new improvements in the accounting functions were not in place as yet for the new accounting staff to be able to accurately gauge at that time what was necessary to enhance and improve the budgeting process. Since that time, however, and in the preparation of the 2009 Business Plan and Budget that was approved by the FRCC Board of Directors on June 27, 2008, these improvements have been implemented and because of this, a better understanding was established to support the improved development of the annual business plan and budget.

In developing the business plan portion of the annual budget, the FRCC staff responsible for the various statutory functions identified in the business plan contributes to its development which results in a very well thought out and successful business plan.

In 2007, NERC accounting staff also changed and an effort began to bring together all the new regional accounting personnel (who were also all hired after June 2007) to discuss the problems with the prior budgeting processing in a collaborative effort to resolve



issues, think through processes, share ideas, better plan the process and establish the supporting documentation necessary. Through this collaborative effort, the budget process has become much more efficient and more reflective of what actual costs will be.

2. *State Regional Entity's assessment of its own effectiveness in developing its business plans and budgets and in the submission its business plans and budgets in a consistent manner with NERC and the other Regional Entities.*

By establishing a cost accounting system to apply all general and administrative costs to the various functions, it has been very easy to evaluate how a program is performing financially as to what was budgeted. The other regions are now beginning to establish the same cost accounting systems so that we have the ability to compare functional costs from region to region.

Additionally the templates that NERC has developed for the Regional Entities to use have been easy to use and make for consistency in reporting.

3. *State any proposals of the Regional Entity to improve its effectiveness in submitting effective, adequate and consistent business plans and budgets.*

FRCC suggests that NERC amend the templates for 2011 to:

1. Use percentages for the comparison rather than dollars, since FERC used percentages of increase to inquire about questionable items.
2. Require that explanations be submitted with the budgets for any increase or decrease of 15% on any line item.
3. Correct common titles, names of functions, etc. before the templates are reissued.

**ATTACHMENT 4B**

**MIDWEST RELIABILITY ORGANIZATION**

**STATEMENT OF ACTIVITIES AND ACHIEVEMENTS**



## MIDWEST RELIABILITY ORGANIZATION

### Statement of Activities, Achievements, and Effectiveness in Carrying Out its Delegated Responsibilities

#### BACKGROUND

*The Federal Energy Regulatory Commission's ("FERC" or "Commission") Regulations at 18 C.F.R. §39.3(c) require the North American Electric Reliability Corporation (NERC) to submit an assessment of its performance three years from the date of NERC's certification by the Commission, and every five years thereafter. The initial performance assessment is due to be filed with the Commission by July 20, 2009; however, the Regional Delegation Agreements (when the Regional Entities were approved by the Commission) expire in May 2010.*

*The Commission's regulations also specify that NERC's three year performance assessment shall include (among other information) NERC's evaluation of the effectiveness of each Regional Entity incorporating recommendations of NERC, users, owners and operators of the bulk power system, and other interested parties, for improvement of the Regional Entity's performance of its delegated functions; and the Regional Entity's response to such an evaluation and recommendations.*

*To initiate the process of preparing the three-year assessment, each Regional Entity was asked to prepare a document describing its activities and achievements, its own assessment of its effectiveness, and any recommendations for improvements, in performing its delegated responsibilities. The principal focus of this document should be the Reliability Standards Development and Organization Registration, Compliance Monitoring and Enforcement programs (the Regional Entity should also include a discussion of its activities in the other four statutory program areas), and should cover activities from January 1, 2007 through March 31, 2009. This document was subsequently updated through May 31, 2009.*

*Additionally, NERC, in conjunction with the Regional Entities, requested feedback from Registered Entities and other stakeholders through a performance survey. This survey was conducted through March 2009. Although the survey was designed as a feedback mechanism for NERC, there were opportunities for Registered Entities and stakeholders to comment and provide suggestions on Regional Entities' performance. While there were few specific comments for MRO, they are included as part of this self assessment.*

#### OVERVIEW

MRO is a non-profit organization (IRC 501(c)(6) based in Minnesota that is dedicated to ensuring the reliability of the bulk power system in the north central region of North America. As one of the eight Regional Entities in North America operating under delegated authority from regulators in the United States and Canada, MRO is responsible for:

1. Developing, proposing and implementing reliability standards.
2. Enforcing compliance with those standards.





3. Providing seasonal and long-term assessments of the bulk power system's ability to meet demand for electricity.
4. Providing an appeals process for enforcement matters.
5. Provide dispute resolution process for business matters.

The MRO region covers roughly one million square miles spanning the provinces of Saskatchewan and Manitoba, the states of North Dakota, Minnesota, Nebraska, and the majority of the territory in the states of South Dakota, Iowa and Wisconsin. The region includes more than 100 organizations that are involved in the production and delivery of power to more than 20 million people. These organizations include municipal utilities, cooperatives, investor-owned utilities, a federal power marketing agency, Canadian Crown Corporations, independent power producers and others who have interests in the reliability of the bulk power system.

MRO was formed in 2002 and began operations in 2005. MRO is governed by a balanced stakeholder board with independent oversight and appropriate procedures to ensure that the standards developed and enforced by MRO are fair and administered in a non-discriminatory fashion. MRO is the successor organization to the Mid-Continent Area Power Pool (MAPP) and Mid-America Interconnected Network (MAIN); both former voluntary regional reliability councils of NERC.

## I. Reliability Standards Development

- A. **Describe Regional Entity's activities and accomplishments in regional reliability standards development since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007.**

The MRO Standards Committee was formed in the initial year of MRO operations in 2005. The Standards Committee is responsible for the MRO Regional Reliability Standards Process Manual approved by the Board of Directors and Federal Energy Regulatory Commission (Commission) in 2007.

Because MRO is a cross-border Regional Entity which operates in three jurisdictions (i.e., the United States, Manitoba, and Saskatchewan), it is important that reliability standards are recognized in all three jurisdictions and remands are quickly addressed by NERC and MRO. MRO has received recognition from the authorities in Saskatchewan and Manitoba through agreements, and as of the date of this report, no remands have been requested.

MRO is currently proposing the following regional reliability standards:

- RES-501-MRO-02 — Planned Resource Adequacy Assessment,
- PRC-502-MRO-02 — Power System Stabilizer Requirement,
- TPL-503-MRO-02 — System Performance, and
- TPL-504-MRO-02 — Sub synchronous Resonance ("SSR") Assessment

The above standards have been drafted and are being reviewed to ensure the requirements are clear, include all of the compliance elements, and follow a standard format.





MRO will propose the following Regional Reliability Standards as part of the NERC standards work plan to support four NERC reliability standards with the “fill-in-the-blank” criteria:

- BAL-002 - Disturbance Control Performance (Operating Reserve – Spinning)
- PRC-002 - Define and Document Disturbance Monitoring Equipment
- PRC-006 - Development and Documentation of Regional UFLS Programs
- PRC-012 - Special Protection System Review Procedure

**B. Explain how the Regional Entity has the ability to develop regional standards and has a standards development process that provides for openness, due process and balancing of interests.**

The MRO standards development process, as approved by NERC and FERC as Exhibit C to the MRO Regional Delegation Agreement with NERC, meets the requirements set forth in Section 215 of the Federal Power Act and the related rules. Participation in the process is open to all organizations in the MRO region. Organizations have the right to participate in meetings and activities, have their opinions considered as part of that process, and appeal decisions of MRO. These organizations also have the right to register and vote on a regional reliability standard proposed by MRO. Notice of all meetings of the MRO Standards Committee and drafting teams are provided on the MRO website, and MRO provides a monthly standards newsletter to brief stakeholders on standards development. To view a copy of MRO’s standards newsletter, please follow this link: [://www.midwestreliability.org/STA\\_newsletter.html](http://www.midwestreliability.org/STA_newsletter.html)

MRO Standards Development Process parallels the “ANSI” and NERC processes, which provides for a balance of interests containing seven industry segments. Approval of a MRO Regional Reliability Standard or revision to a MRO Regional Reliability Standard requires:

- a quorum, which is established by at least 4 of the Segments submitting a response with an affirmative vote, a negative vote, or an abstention; and
- An affirmative vote from at least two-thirds of the segments participating in the vote. Each segment vote is determined by the majority of the votes cast in the segment, either affirmative or negative. Abstentions and non-responses are not counted.

MRO’s standards development process ensures due process by providing public notice of the intent to develop a Regional Reliability Standard on the Reliability Standards Voting Process (RSVP) application. This web application automates the voting, commenting and tracking of any proposed standard in order to maintain a record of its development. The tracking site allows all interested parties to submit comments during the commenting period and provides an appeals process.

**C. State Regional Entity’s assessment of its own effectiveness in reliability standards development since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**





MRO's effectiveness in reliability standards development has steadily improved since its inception in 2005. Upon its formation, MRO performed a detailed analysis of its predecessor's regional processes and requirements for standards. Once this process was complete, MRO educated the broader stakeholder groups of the Standards Development Process under the new, mandatory standards regime established by Section 215 of the FPA.

MRO developed an on-line application known as "RSVP" (discussed above), to track and provide a record of the regional standards development process. The application greatly improves how standards are presented and evaluated by stakeholders and allows MRO staff to collect comments from across the geographical footprint. Votes are also easily compiled from ballot body members. The application is available for use by other Regional Entities.

MRO staff has participated in both NERC and MRO workshops in 2007 and 2008 to better communicate and educate stakeholders about standards development and the pending impact to the bulk power system.

MRO is currently proposing four Regional Reliability Standards that are being developed in a coordinated effort with NERC and the other Regional Entities and are included in NERC's three-year standards development work plan. MRO believes that Regional Reliability Standards can be developed more easily if NERC provides guidance on the basic requirements necessary for all of the Regional Reliability Standards. In the future, there may be a shift from developing Regional Reliability Standards to developing regional variances to NERC standards. The due process and public review of variances should be subject to the same development process as Regional Reliability Standards.

**D. State any proposals of Regional Entity to improve its effectiveness in reliability standards development**

The MRO Standards Committee is primarily responsible for assuring that the standards development process is effective. This balanced committee meets frequently to review its effectiveness and establish improvement plans.

MRO believes that the priority needs to be on North American-wide and Interconnection-wide reliability standards. NERC and the Regional Entities should refocus their collective efforts on expediting the "fill in the blank" standards and place a hold on any non-emergency reliability standards. The speed at which the industry can absorb new standards is resource limited. The priority should be to fix the "fill in the blank" standards (those standards not originally accepted by the Commission), and standards that address emerging issues or risks found through Event Analysis.

MRO sees a benefit in adding linkages between assessments and compliance and standards development. These benefits include a better understanding of compliance requirements and addressing emerging issues that may require accommodation in future standards (e.g. issues identified in long term assessments). MRO staff provides the necessary forums to assure there is sufficient information sharing.

In addition, MRO communicates relevant information to Registered Entities and other stakeholders by providing standard workshops, webcasts, and other communications.





## II. Organization Registration and Compliance Monitoring and Enforcement Program

- A. Describe Regional Entity's activities and accomplishments in OC/CMEP since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007. This description should emphasize quantitative information, e.g.: Staffing; numbers of registered entities registered; numbers of workshops, seminars, training and education sessions, etc. conducted; numbers of compliance audits conducted and reports processed; numbers of other compliance processes conducted and processed, e.g., spot-checks, self-certifications, etc.; numbers of notices of violation issued and processed; numbers of mitigation plans processed.**

The MRO 2007 Compliance Monitoring and Enforcement Program (CMEP) activities included the following initiatives.

- Entity registration was a large initiative utilizing the NERC Compliance Registration Criteria to identify owners, operators, and users of the bulk power system. The MRO registry expanded from 35 to 120 Registrants by year end.
- Compliance and Enforcement Flow Charts were developed by reverse engineering the CMEP program document. The flow charts have proven to be an effective tool for training Registrants and MRO staff on the CMEP processes.
- There were nine audits performed by MRO staff. MRO does not use contractors or consultants as auditors at this time.
- MRO had a total of 133 pre-June 18th violations. 113 violations were confirmed and mitigation plans were approved while the other 20 were dismissed.
- MRO held one reliability workshop in May 2007. All material presented at the workshop was made available to the Registered Entities unable to attend.
- The annual self-certification was performed in the fourth quarter of 2007 and resulted in approximately 500 submittals requiring additional review by MRO staff. The 2007 self-certification resulted in the discovery of 31 alleged violations.
- MRO compliance staff participated in both NERC and Regional working groups with the overall objective of increasing consistency between all regions and enhancing transparency with the Registered Entities.
- The MRO 2008 Annual Implementation Plan was developed and submitted to NERC by the November 1, 2007 deadline. NERC approved the plan.

The 2008 Compliance Monitoring and Enforcement Program (CMEP) activities included the following initiatives:

- There were 17 audits performed using a refined method of reviewing the compliance evidence submitted by Registered Entities. All compliance audit reports were developed and submitted to the Registered Entity and to NERC within the defined CMEP timing criteria.





- The Compliance Data Management System (CDMS) 4.0 went into production in March, and MRO received positive feedback from Registered Entities pertaining to the new and improved compliance information management tool.
- Entity registration continues to be an ongoing effort. In addition, MRO initiated a project in 2008 where staff performs an inventory of the bulk power system generation facilities and transmission elements that meet NERC Compliance Registration Criteria. This project was completed in first quarter of 2009. All pre-June 18, 2007 violations were validated for completion and officially closed in May 2008.
- MRO held two reliability workshops in 2008 that were attended by eighty-two percent of MRO's Registered Entities. Materials presented at both workshops were made available to the Registered Entities unable to attend.
- In July, 2008, a self-certification was performed by all MRO Registered Entities for the CIP-002 through CIP-009 Reliability Standards. MRO submitted the summary report to NERC prior to the required deadline. MRO received an action plan from those Registered Entities identified as behind schedule pursuant to the defined timeline found in the CIP standard implementation plan. MRO continues to track the status of these action plans.
- The annual self-certification resulted in approximately 750 submittals requiring additional review by MRO staff and has resulted in the discovery of two alleged violations. MRO believes the overall improvement of the self-certification results from 2007 to 2008 is a result of the educational workshops provided by MRO and of the experience gained by Registered Entities operating under the CMEP.
- MRO compliance staff participated in NERC and Regional working groups with the overall objective of increasing consistency between all regions and enhancing the transparency with the Registered Entities.
- The MRO Compliance Committee monitors MRO staff in the implementation of the CMEP. The committee is currently working on the development of metrics to be used for measuring the performance and quality of work performed by MRO.
- MRO compliance staff received the required NERC auditor training in 2008. In addition, MRO (in conjunction with the other Regional Entities) worked with an outside vendor to develop a more hands-on, detailed auditor training course based on the authoritative audit principles. To date, all MRO compliance staff has received this new and improved training.
- MRO created and implemented a new process called 'Incident Reviews' to supplement its efforts regarding the CMEP. MRO established its responsibility to review and assess incidents (such as disturbances) that occur on the Bulk Power System (BPS) to determine if the system responded as expected, and whether the Registered Entities involved responded prudently according to the Reliability Standards and good utility practice in protecting BPS reliability. The possible outcomes of an Incident Review include: no further action; escalation to a formal Compliance Violation Investigation (CVI); or a possible alleged violation of a Reliability Standard. A non-public report is provided to the Registered Entities, NERC, and if applicable, the Commission. MRO staff







will initiate an “incident inquiry review” once they become aware of a system incident, disturbance, or event. This process was implemented six times since inception.

The 2009 Compliance Monitoring and Enforcement Program activities include the following initiatives:

- MRO initiates spot-checks on a monthly, quarterly, and annual basis. In addition to performing spot checks in 2009 as described in the NERC Implementation Plan, the MRO 2009 plan calls for accelerated, more frequent “random” spot checks of Registered Entities, subject to staffing priorities.
- The MRO 2009 Annual Implementation Plan was developed and submitted to NERC by the November 3<sup>rd</sup> deadline. MRO is using the 2009 NERC audit questionnaire in the development of the MRO 2009 audit “packet” that is included in the sixty-day notice of an audit to the Registered Entity.
- MRO completed the second CIP-002 through CIP-009 self-certification in January 2009 with reports completed in March 2009. MRO is currently preparing to implement the third CIP self-certification in July 2009.
- Compliance assessment, mitigation, and validation are a continuous effort. The following represents the status of alleged violations from June 18, 2007 through May 31, 2009.

97 total violations

- 97 violations reported to NERC (as of May 31, 2009)
- 4 violations processed through settlement
- 13 violations in settlement discussions
- 20 violations dismissed
- 53 violations have been resolved through completed mitigation plans which were validated as complete by MRO staff
- 1 violation declared as “mitigation complete” by Registered Entity, but validation remains pending by MRO staff
- 26 violations remain open and are within the CMEP timing criteria

Violation Timeframe	Number of Possible Alleged Violations	Number of Dismissed Alleged Violations	Number of Violations with Notice of Alleged Violations	Number of Violations with Notices of Confirmed Violations Filed with NERC	Number of Violations Resolved through Completed Mitigation Plans
<b>2007 Pre-June 18</b>	133	20	0	0	113
<b>2007 Post-June 18</b>	46 <sup>1</sup>	8	37	37	38
<b>2008</b>	30 <sup>2</sup>	11	14	11	14
<b>2009 YTD</b>	21	1	0	0	1

<sup>1</sup> Includes 1 violation resolved through settlement

<sup>2</sup> Includes 3 violations resolved through settlement

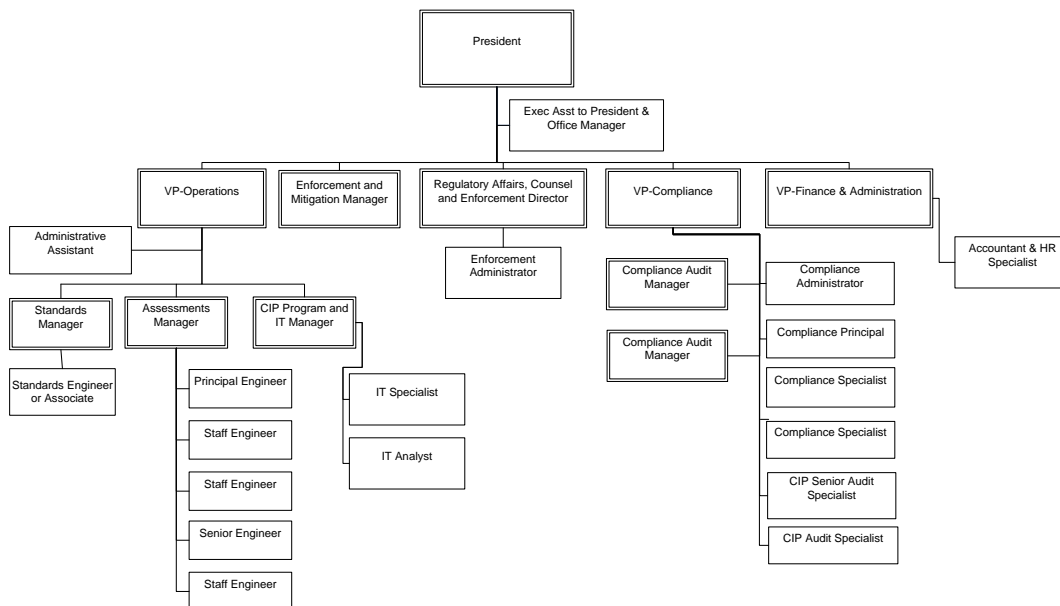




Standards Most Frequently Violated	Frequency	% to Total
PRC-005-1 Trans. And Gen. Protection System Maint. and Testing	24	25%
CIP-001-1 Sabotage Reporting Procedures	10	10%
CIP-004-1 Personnel and Training	10	10%
FAC-003-1 Vegetation Management Program	10	10%
PRC-004-1 Anal. And Mitigation of Trans. And Gen. Protect. Sys. Mis.	6	6%

**Staffing.** MRO increased its staffing in 2008. MRO staff performs all processes associated with the compliance and enforcement program. MRO does not use outside consultants or contractors at this time for auditing purposes. As previously noted, MRO does not use stakeholders in any compliance and enforcement determinations, including audits or other discovery methods. MRO added a Director of Regulatory Affairs and Enforcement in 2008, an Enforcement Administrator and Senior Critical Infrastructure Protection Audit Specialist in 2009, and established an Enforcement and Mitigation Manager position in 2009. In addition, MRO will be adding two positions in the compliance area to address the increased work load. MRO Compliance and Enforcement staff follows the structure illustrated below:

**Midwest Reliability Organization**  
April 6, 2009



Date Updated: 04/06/09





**Organization Registration.** Registration is an ongoing effort. In 2007, MRO sponsored several conference calls, WebEx and a workshop which included new and prospective entities and encouraged asset owners and operators to identify prospective Registered Entities. In addition, MRO specifically reached out to smaller entities which were not part of the previous voluntary construct. A project pertaining to the identification of transmission elements and generator facilities is currently underway by MRO. MRO has expanded registration to include an inventory of the elements of the bulk power system and has identified all elements and facilities that meet NERC registration criteria for the bulk power system. This is an extensive project, however, MRO believes it is necessary to complement the functional registration and establish a more accurate, complete registry.

In performing this process, MRO has found a number of jointly owned facilities which will result in the development of additional Joint Registration Organizations. MRO has been attentive in developing processes to allocate or assign CMEP responsibility where a Registered Entity's operating boundary crosses multiple Regional Entity boundaries. This multi-Region Registered Entity (MRRE) project will eliminate redundancy where Registered Entities will have a designated "host" Regional Entity who will act as a lead coordination point for the Registered Entity. The project also includes identifying a "host" for Purchasing Selling Entity (PSE)-only Registered Entities, and where the Purchasing Selling Entity has one primary office and yet is registered in all eight regions.

**B. Describe how the Regional Entity has the ability to enforce reliability standards and to provide for an adequate level of bulk power system reliability in its Region.**

MRO is following the requirements as defined by the CMEP Rules of Procedure (ROP), and the delegation agreement between MRO and NERC. These documents provide the foundation for monitoring and enforcing reliability standards across the region. MRO has been adequately staffed to carry out its responsibilities under the CMEP. Many MRO staff members responsible for implementation of the CMEP have previous employment experience within the industry, specifically within the MRO Region, and have extensive knowledge of the operation of the bulk power system.

MRO is a cross-border Regional Entity and operates in three jurisdictions: Manitoba, Saskatchewan, and the United States. In the United States, MRO has a Delegation Agreement which stipulates its authority on enforcement of Reliability Standards. In Manitoba, MRO and NERC executed an Interim Agreement which specifies aspects of enforcing Reliability Standards. In Saskatchewan, MRO and NERC have approved a Memorandum of Understanding which was effective December 11, 2008.

MRO recognizes that in operating in three distinct jurisdictions, staff must use care in performing its responsibilities consistent with the applicable agreements. MRO has worked to establish process flowcharts to assist in understanding the unique characteristics in the jurisdiction and they can be found at:

[://www.midwestreliability.org/COMP\\_audit\\_information.html](http://www.midwestreliability.org/COMP_audit_information.html)





### C. Describe how the Regional Entity has fair and impartial procedures for enforcing reliability standards

An important foundation for effectively enforcing reliability standards is to ensure that the organization itself is free of conflicts and able to render impartial enforcement decisions. The following facts assure that MRO is properly aligned to preserve the public trust in its conduct of enforcement decisions:

1. MRO is not affiliated with any bulk power system operators, owners, or users.
2. MRO governance structure meets the requirements set forth in Section 215(e)(4) of the Federal Power Act and has the necessary procedures in place to assure a stakeholder Board does not impair or otherwise impede the ability of staff to render impartial enforcement decisions. MRO has established rules that assure balance in its decision-making committees and subordinate organization structures to assure that no two industry sectors can control any action and no one industry sector can veto any action. MRO has adopted and implemented the uniform CMEP as approved by the Commission which provides for fair and impartial procedures for enforcing Reliability Standards.
3. MRO employs trained staff, or independent consultants as necessary who are free of perceived or real conflicts, subject to NERC's code of conduct, and consistent with NERC rules in the performance of any enforcement methods under the Compliance Monitoring and Enforcement Program. Employees are subject to these rules as a condition of employment, and consultants are subject to these same rules through independent agreements. Stakeholders do not participate in any discovery methods or enforcement determinations (except as permitted through the hearing procedures in the CMEP). In addition, MRO, through Commission requirements, recognizes Generally Accepted Government Auditing Standards (GAGAS) (July 2007 Revision), in particular paragraph 2.05.

*2.05 The ethical principles that guide the work of auditors who conduct audits in accordance with GAGAS are:*

- a. the public trust;*
- b. integrity;*
- c. objectivity;*
- d. proper use of government information, resources, and position;*
- e. professional behavior.*

Although MRO is not a government auditor, MRO recognizes that its position must be used for the purposes intended through its delegated authority and that misuse of this position would undermine MRO's ability to impartially enforce reliability standards and otherwise carry out its responsibilities consistent with maintaining the public trust. All MRO staff is under the same confidentiality, conflict, and code of conduct rules and is expected to report any possible alleged violation regardless of their responsibilities at MRO.

MRO emphasizes the training of its staff in order to sufficiently carry out its responsibilities. In addition to NERC training, MRO and the rest of the Regional Entities supplemented the NERC training with third party training to provide the necessary skill set for staff. For example,





experienced operational and engineering personnel are usually best suited to perform discovery work required by the CMEP, but most need the necessary training in due process and audit and investigation techniques.

MRO has segregated its compliance (e.g. discovery) from enforcement activities. Once a possible or alleged violation is discovered, MRO staff responsible for discovery meets with enforcement staff to review facts and circumstances in order for enforcement staff to derive an enforcement decision consistent with the NERC Sanction Guidelines. In addition, there is a review of the Reliability Standard and the Commission's guidance (e.g. Order 693), if applicable, on the particular Reliability Standard to assure the interpretation is consistent with NERC and Commission guidance. MRO staff reviews the Reliability Standards and the Commission Orders prior to discovery activities.

If a Registered Entity believes it is being treated unfairly during the conduct of discovery, MRO encourages the Registered Entity to escalate the matter to senior management at MRO. While MRO recognizes its duty to carry out its responsibilities to protect reliability of the bulk power system, MRO respects those who operate the system and will allow them to discuss matters directly with senior management. This provides an effective "check and balance" of MRO's staff conduct in discovery and can be a source for improvements in the performance of the work, while setting the expectation to the Registered Entity that staff must carry out its responsibilities consistent with the delegated authority. After discovery, Registered Entities are informed of the due process protections highlighted in the CMEP. MRO, through its various workshops, has provided education to the Registered Entities on their due process protections once an alleged violation has been discovered.

**D. State Regional Entity's assessment of its own effectiveness in OC/CMEP since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed**

MRO's effectiveness has significantly improved since the inception of mandatory Reliability Standards. The rigor, quality, and professionalism, using Government Auditing Standards (July 2007 Revision) as a benchmark for audits, for example, has increased based upon informal comments from MRO and other staff from Registered Entities and Regions.

The quality and professionalism of the compliance program implementation by MRO has improved primarily due to enhanced training of staff. As a result, MRO staff is more knowledgeable of NERC Rules of Procedure, CMEP, and GAO auditing techniques and practices. This administrative knowledge, coupled with existing industry experience, provides a very credible, seasoned group of professionals to enforce Reliability Standards in the region. In addition, the Registered Entities are more aware of their obligations and requirements related to meeting the applicable Reliability Standards and primarily due to education and training, the Registered Entities have improved documentation, procedures, and processes resulting in overall improved quality of evidence demonstrating compliance.

In addition, MRO provides quarterly CMEP reports to stakeholders on CMEP activities and key findings. To view a copy of MRO's quarterly CMEP reports, please follow this link: [://www.midwestreliability.org/COMP\\_cmepe\\_updates.html](http://www.midwestreliability.org/COMP_cmepe_updates.html)





MRO reviews the feedback from its workshops and responds to areas for improvement. MRO held the first of its 2009 Reliability and Compliance workshops on March 25, 2009. The attendees included 137 participants from over 73% of MRO's Registered Entities. The workshop presented an overview of the MRO Delegation Agreement activities with a focus on the Critical Infrastructure Protection Standards and demonstrating compliance for protection system (PRC standards). Suggestions and comments regarding the format and content of the workshop may be found at [://www.midwestreliability.org/events\\_4.html](http://www.midwestreliability.org/events_4.html)

**E. State any proposals of Regional Entity to improve its effectiveness in OC/CMEP.**

MRO has proposed the development of processes to enhance the Registry where a Registered Entity's operating boundary crosses Regional Entity boundaries. This multi-Region Registered Entity (MRRE) project will eliminate redundancy where Registered Entities will have a designated "host" Regional Entity as it pertains to the implementation of the CMEP. Please refer to the "Organization Registration" section above.

MRO enhanced its auditing techniques (statistical and random sampling, extensive evidence review prior to on-site audits to determine priority and/or possible risk areas) and has also enhanced the auditor training by studying the GAO requirements and developing more extensive training with an expert third party consultant. MRO and the other Regional Entities are proposing the development of additional training modules to increase the knowledge base of staff performing responsibilities under the delegated authority.

MRO proposed the implementation of a defined audit process pertaining to the Coordinated Function Registration, (for example, the Midwest ISO Balancing Authority (BA) certification process). MRO believes that an audit must be performed using the Reliability Standard requirement matrix as approved by the functional certification team to assure that there are no "gaps" in responsibilities in meeting requirements of the Reliability Standards.

MRO staff actively participates in working groups and other forums where compliance and enforcement staff from NERC and the regions work together in the identification of compliance program enhancements. MRO stakeholders are encouraging the formation of a "forum", which will be funded by those Registered Entities in the MRO region who have a common interest to share lessons learned with one another. This group was proposed by a stakeholder at the last workshop on March 25, 2009, and will not be affiliated with MRO.

### **III. Other Program Areas**

**A. Reliability Readiness Evaluation and Improvement Program**

**1. Describe Regional Entity's activities and accomplishments in Reliability Readiness Evaluation and Improvement since January 1, 2007, including discussion of improvements in this area.**

MRO has been a co-leader, along with a NERC representative, on a number of Readiness Evaluations in 2007 and 2008 at Registered Entities including American Transmission Company, Lincoln Electric System, Southern Minnesota Municipal Power Agency, Manitoba





Hydro, Minnesota Power, and Saskatchewan Power Company. A Readiness Evaluation is a process that probes all facets of a company's functions and could potentially focus on any NERC standard, especially if the Registered Entity is failing to meet requirements of a Reliability Standard. In particular, a Readiness Evaluation focuses on how well the Registered Entity is performing the functions for which it is registered and includes practical recommendations to enhance its operations.

MRO and NERC used a Readiness Evaluation of Saskatchewan Power Company to review its operations to certify that it was capable of performing the functions of a Reliability Coordinator and the other functions it has registered for on the NERC compliance registry.

- 2. State Regional Entity's assessment of its own effectiveness in Reliability Readiness Evaluation and Improvement since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

MRO participated in a number of Readiness Evaluations and followed up on recommendations that resulted from the evaluations to insure they were implemented or considered. This is a valuable program as each entity has an opportunity for an evaluation. In MRO's judgment, the value of the program as designed declined following the initial review and as other efforts in the CMEP area accomplished similar goals.

- 3. [Discussion of proposed improvements not needed, since this program is being phased on in the first quarter of 2009.]**

With the elimination of the Readiness Evaluation program, MRO has dedicated more resources to analyze events, incidents inquiries and reviews. MRO staff believes that thorough analysis of system disturbances through Event Analysis and informal means such as incident inquiries represents valuable lessons on bulk power system reliability. Recommendations resulting from Event Analysis, such as the September 18<sup>th</sup>, 2007 event, are valuable to assure that the Registered Entities are addressing key findings resulting from these analyses.

## **B. Training, Education and Operator Certification**

- 1. Describe Regional Entity's activities and accomplishments in Training, Education and Operator Certification since January 1, 2007, including discussion of improvements in this area.**

MRO recently acquired a web-based training system called System Operator Training Solution (SOTS). SOTS is a web based training application built to meet the complete needs for both individuals and companies for the power system operator continuing education program as designed by NERC. The program includes over 130 training modules developed by a training development company on topics which support System Operator training needs. The SOTS application will be deployed later in 2009.

MRO has organized annual standards workshops as a way to engage the stakeholders within MRO and provide information and education about the Reliability Standards development.





In 2007, one workshop was held in the spring and was well attended by Registered Entities. The focus of this workshop was to introduce the standards development program to the stakeholders. Topics included:

- Basic elements of the mandatory reliability standards regime
- Distinction between Regulatory-approved standards and NERC-approved standards
- Standards process overview

In 2008, a second workshop was held and drew about 75 attendees from the MRO Registered Entities. The focus of this workshop was basic education about the standards program. Topics included:

- Overview of the regional standards development process and potential standards
- Key standards to be developed in the NERC three year work plan, including important “fill in the blank” standards
- Web Site tutorials for Registered Entities
- Open panel discussion

Attendees from both workshops provided positive feedback on the opportunities to learn about the standards development process.

MRO has also organized several Compliance Seminars in the past two years.

MRO’s first Compliance Seminar was held on May 31, 2007. Attendance included 135 representatives from 82% of entities registered in the Region. The focus of the seminar was preparing for and training on the NERC Compliance Monitoring and Enforcement Program (CMEP) for the upcoming start of mandatory compliance with the Regulatory Approved Standards.

In 2008, building on feedback from Registered Entities, MRO held two seminars. Total attendance for the seminars was 210 representatives from over 86% of MRO’s Registered Entities. Topics covered included elements of a strong compliance program, a general overview of the NERC CMEP, tools used by MRO to track compliance, preparation for the CIP Self Certification, and enforcement processes. Preparing for a Compliance Audit was the focus of a panel discussion of three MRO Registered Entities that had recently participated in the audit process.

For 2009, MRO plans to hold two seminars. Each seminar will focus on specific discovery methods outlined in the NERC CMEP. Panel presentations will focus on steps taken by Registered Entities to build strong compliance programs. In the first workshop of 2009, a review of protection system requirements and CIP requirements was provided to the Registered Entities.

The 2009 seminars will also include topics related to standards development, reliability assessments, and more detailed critical infrastructure protection reviews. MRO is dedicated







to the continued delivery of training that meets the ever-changing needs of the electric industry.

- 2. State Regional Entity's assessment of its own effectiveness in Training, Education and Operator Certification since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

Much of MRO's training and education is directed at primary functional areas that MRO is responsible for through the delegation agreement. The workshops, webinars, and conference calls to support these responsibilities are normally done in conjunction with NERC. MRO works with NERC regarding Operator Certification. In addition, the new System Operator Training System (SOTS) program will provide an effective means for continuous training for the Registered Entities.

MRO-sponsored seminars have been very well attended. Attendees have provided positive and constructive feedback on the topics and have shared ideas on future seminars. MRO structured the 2009 seminars based on feedback from Registered Entities and the anticipated CMEP implementation plans.

- 3. State any proposals of Regional Entity to improve its effectiveness in Training, Education and Operator Certification.**

Refer to Items 1 and 2 above.

MRO would like to spend the majority of its time on "prevention" by educating and training Registered Entities on the CMEP, Reliability Standards, and requirements. A compliance program which meets the criteria in NERC Sanction Guidelines and Commission's Policy Statement on Compliance dated October 18, 2008 is an essential element to consider for a Registered Entity's compliance activities. Reliability workshops and other outreach type programs support "prevention". A new Registered Entity forum group called the Mid-Continent Compliance Forum (MCCF) was created at the MRO March 2009 workshop. The first meeting is scheduled to be held in July where MRO compliance and enforcement staff will provide information and address questions.

### **C. Reliability Assessment and Performance Analysis Program**

- 1. Describe Regional Entity's activities and accomplishments in Reliability Assessment and Performance Analysis since January 1, 2007, including discussion of improvements in this area.**

The Reliability Assessment area of NERC has undergone several changes in the past few years and has realized many improvements as a result. For example, NERC and its Regional Entities have worked closely to improve on the definitions and criteria for how future generation should be included in the long-term assessment. A realistic estimate of future generation is critical for predicting accurate reserve margins. MRO has embraced these new definitions and has communicated these new definitions and processes to the recipients of





the assessment data requests. This helps to assure that data is provided consistently throughout the region, and provided only once for accuracy.

The MRO region continues to collect reliability assessment data from its individual Registered Entities. Although this takes more effort, it allows MRO to have a high level of granularity that is often needed in the assessment process. It also helps us to investigate and verify the data more quickly if there is an unexpected change from the previous year.

The MRO region has the potential for a significant increase in wind generation installations. As of June 1, 2008, the MRO region had 4,000 MW of nameplate wind generation and the nameplate capacity has increased by 25% within 6 months (as of December 1, 2008). The generation interconnection queue holds over 38,000 MW of additional wind generation. In response to this, MRO formed a wind generation modeling task force. A wind generation modeling manual was created to help educate the regional data reps on how best to submit wind generation data to the Model Building Subcommittee. Additional progress is still needed within the industry regarding wind generation modeling, particularly development of dynamics models. MRO will closely track this effort as tools and improvements are made in this area to assure that models reflect wind generation as accurately as possible. MRO will also make every effort to collect proprietary IPP wind generation data for modeling accuracy.

MRO has coordinated with the ReliabilityFirst Organization, the Regional Coordinator covering much of the Midwest, and other Registered Entities to provide NERC with an assessment of serving 15% of energy with variable generation (i.e. wind) as requested in the NERC 2008 LTRA Scenario Assessment. The information for this assessment consists of data submittal and narrative information. The data portion of this assessment was submitted in May 2009, and the narrative section will be submitted in July 2009.

In March 2007, MRO completed a full review of its regional Under Frequency Load Shedding (UFLS) program. Potential improvements to the existing program and opportunities to increase coordination with generation protection were identified and MRO recommended they be incorporated into the regional UFLS standard that is currently being drafted.

MRO has formed the Protective Relay Subcommittee as a result of the 2003 Northeast Blackout and to effectively manage the NERC PRC standards that resulted. Key responsibilities of this group include: reviewing transmission and generation mis-operations on a quarterly basis, reviewing new and existing Special Protection Systems to meet NERC criteria, and establishing regional criteria for disturbance monitoring equipment. This group is also working on a regional procedure to effectively manage system disturbance analyses.

On September 18, 2007, the MRO region experienced a system cascading event which ultimately resulted in two islanding conditions, loss of load and generation, and UFLS. MRO, jointly with its members, Registered Entities, and NERC staff completed a comprehensive analysis of this system disturbance. Roughly 30 recommendations were developed from the lessons learned. These recommendations will be sent to appropriate entities through either the NERC Alert procedure or through MRO staff correspondence. MRO staff will provide





quarterly reports to the Board on the progress of addressing the recommendations. A public version of the Event Analysis report can be found at [.midwestreliability.org](http://midwestreliability.org).

**2. State Regional Entity's assessment of its own effectiveness in Reliability Assessment and Performance Analysis since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

MRO has been staffed to meet the requirements of the Reliability Assessment area since January 1, 2007. Each seasonal and long-term assessment has been accurately performed and has been submitted to NERC within the due dates. MRO staff has accurately responded to all data requests in a timely manner, meeting the due dates specified by NERC, and MRO provides support to the NERC Reliability Assessment process by actively participating in the various NERC groups that develop the assessments.

MRO staffing has increased since January 1, 2007 to meet the growing demands in the area of Reliability Assessments, and this increase has created more balance in the use of external, independent consultants and staff. MRO expects to be able to perform the Reliability Assessment responsibilities more effectively by utilizing staff to actively participate on the various NERC groups that support Reliability Assessments and Performance Analysis. In addition, MRO staff will take an active role in tracking industry alerts and recommendations from NERC and MRO.

**3. State any proposals of Regional Entity to improve its effectiveness in Reliability Assessment and Performance Analysis.**

The responsibilities within the NERC and Regional Entity Reliability Assessment area continue to grow each year. New NERC groups are being established under the NERC Planning and Operating Committees and existing NERC groups are taking on additional responsibilities. Staff from the Regional Entities is required to support these group efforts. Additional staff is also required for the increase in data requests that are expected to occur, to establish reliability metrics and to perform additional assessments. MRO is committed to meeting all of the requirements and needs associated with Reliability Assessments and Performance Analysis. By adding staff in 2009, MRO will be able to actively participate in the NERC groups as required to help assure reliability for the region.

One way to help the Regional Entities become more effective in assessing reliability would be to reassign the remaining fill-in-the-blank standards (that presently apply to the Regional Reliability Organizations) to the appropriate Registered Entity (often the Planning Authority or Reliability Coordinator). This would eliminate the confusion as to what the Regional Entity's role is in relation to NERC Reliability Standards and Reliability Assessments.

**D. Situational Awareness and Infrastructure Security Program**

MRO is working with the other Regional Entities and NERC to establish the tools which will enhance the ability of MRO to perform this program. Currently, Reliability Coordinators provide the means for situational awareness across North America. MRO staff is included on the pertinent e-mail exploders and other communications means. MRO has budgeted the necessary funding to deploy the available Situational Awareness tool(s) by July 1, 2009.





**1. Describe Regional Entity's activities and accomplishments in Situational Awareness and Infrastructure Security since January 1, 2007, including discussion of improvements in this area.**

NERC identifies its Situational Awareness and Infrastructure Security (SAIS) mission as:

1. Maintain a high level awareness of conditions on the bulk power system and rapidly communicate substantive changes in those conditions to relevant parties.
2. Understand emerging threats and vulnerabilities to the reliability of the bulk power system and direct activities to mitigate them.
3. Develop and maintain tools that meet the needs of our overall reliability mission as the international ERO.

The Regional Entities play an important role in helping NERC meet its goals and objectives in the Situational Awareness area. MRO has been an active participant working with NERC to clarify roles and responsibilities on a going-forward basis. Current Situational Awareness activities include, but are not limited to, the following:

1. Compile a list of Situational Awareness information currently collected by NERC, Regional Entities, and others such as Reliability Coordinators and Regional Transmission Organizations. Define what is currently shared with FERC and in what form.
2. Share the catalog of information with FERC and describe the benefits and drawbacks of the Situational Awareness information. With FERC, identify the information necessary to meet its Situational Awareness needs. Develop protocols and procedures to accomplish the Situational Awareness information exchange with FERC, with a careful eye to protecting confidential information.
3. Evaluate existing Situational Awareness tools and recommend rapid deployment alternatives, including the proposed NERC tool for this purpose (budgeted for deployment by July 1, 2009).
4. Implement a feedback mechanism to ensure the goals of the Situational Awareness information exchange continue to be met.

**2. State Regional Entity's assessment of its own effectiveness in Situational Awareness and Infrastructure Security since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

MRO is a cross border Regional Entity responsible for implementing the duties and assignments as described in the Delegation Agreement with NERC. MRO does not perform functions beyond the Delegation Agreement (i.e., such as performing the Reliability Coordinator function etc.). However, MRO is dedicated to the situational awareness and infrastructure security initiative and acknowledges the importance of; maintaining a high level awareness of conditions on the bulk power system and rapidly communicating substantive changes in those conditions to relevant parties; understanding emerging threats and vulnerabilities to the reliability of the bulk power system and directing activities to





mitigate them; and providing assistance in the development of tools that meet the needs of the overall reliability mission of NERC, as the international ERO.

There are three Reliability Coordinators in the MRO region. The Reliability Coordinators and the individual transmission operators have provided information to MRO on events, unusual operating conditions and potential operating issues so that MRO staff has the appropriate “awareness”. The upcoming plans for implementing a situational awareness tool will greatly increase MRO’s access to information, preparedness to address issues, and ability to provide timely information to others, including regulators.

In late 2008, the MRO Board approved the creation of a Security Committee. The work of this committee is just getting started, however, we believe this committee will improve or enhance situational awareness and infrastructure security by providing a forum for Registered Entities responsible for adhering to the cyber and physical reliability standards to openly discuss and exchange ideas and concepts.

**3. State any proposals of Regional Entity to improve its effectiveness in Situational Awareness and Infrastructure Security.**

MRO will continue to work with NERC and regulatory staff to successfully implement the Situation Awareness tool(s) as necessary. MRO will continue to participate on the NERC/Regional Entity Situation Awareness communication team to ensure plans and protocols for communicating Situational Awareness information between and among NERC, FERC, Regions, and other relevant stakeholders are consistent and coordinated. This includes the identification and deployment of any applications necessary to rapidly exchange situational awareness-related information and foster collaboration with information sharing partners. Examples include; working with NERC to develop and implement an industry notification system; creating and maintaining e-mail lists organized by subject matter expertise; and working with Critical Information Protection Committee to define and implement a new web-based threat and incident reporting system. The MRO Security Committee has the overall objective of providing a forum for Registered Entities to discuss issues and concerns related to cyber and physical security within the MRO region.

**E. Budgeting**

**1. Describe Regional Entity’s activities and accomplishments in the development and submission of its annual business plan and budget, beginning with the 2007 business plan and budget.**

MRO successfully obtained NERC and FERC approval of the United States-portion of its 2007 and 2008 business plans and budgets and eventual approval of its 2009 business plan and budget. Similar to the other Regional Entities and NERC, MRO has been able to improve its budgeting estimates and processes since submission of its 2007 business plan and budget, primarily because the expectations of Regional Entities have become clearer over the past two years and MRO has gained experience in performing Regional Entity duties.





MRO followed NERC guidance and used NERC templates when it prepared its 2007 business plan and budget. At the time the 2007 Regional Entity budgets were developed, however, NERC and FERC expectations about Regional Entity performance was just beginning to evolve. No Regional Entity had experience in performing the duties under the Regional Delegation Agreement. MRO's 2007 business plan and budget was developed in accordance with NERC guidance, but the budget projected higher than the actual expenditures. The primary reason for this positive variance was the budget anticipated a full year of operations, but (a) MRO's Delegation Agreement was not conditionally approved by FERC until April 2007; and (b) per FERC Order, the implementation of mandatory standards did not begin until June 2007. Because of this, MRO delayed increasing its staffing until mid-2007 and the implementation of its capital (hardware and software) projects until 2008. In addition, MRO had a more difficult time than anticipated in locating and hiring qualified staff, so it experienced unintended vacancies through mid-2008.

Since 2007, MRO gained experience as it performed its Regional Entity duties in accordance with its Delegation Agreement, the NERC Rules of Procedure, NERC guidance, and FERC orders. All MRO employees track their time using electronic timesheets that incorporate the functional categories in the NERC Chart of Accounts and separate time spent on non-statutory duties.

As MRO's experience as a Regional Entity has grown, the time tracking system has captured the amount of time MRO employees spend working in each functional area. This allows MRO to more accurately budget for future periods. MRO acknowledges that the expectations and requirements of MRO and the other Regional Entities will likely continue to evolve over the next few years, but MRO's budget procedures and time tracking system should continue to help MRO to produce quality budget projections.

MRO followed all NERC guidance and templates in preparing its 2008 business plan and budget. Because MRO was required to prepare and obtain board approval for the business plan and budget in mid-2007 and the reliability standards became mandatory in June 2007, MRO still had only a partial year of experience at the time of the 2008 budget preparation. The 2008 budget development process was improved because (a) MRO, NERC, and the other Regional Entities had the benefit of FERC orders on the 2007 budgets; and (b) NERC, MRO, and the other Regional Entities met to discuss and gain general consensus on the budget requirements, given the short history of the Regional Entity organizations.

MRO makes it a priority to diligently and effectively communicate with NERC regarding all required financial reports. MRO will continue to keep this as a priority and will continue to provide all required financial reports on or before the date due.

In 2008, MRO established a separate interest-bearing escrow account for the segregation of any fines and penalties, to ensure such monies are not commingled with operating funds.

MRO's 2009 business plan and budget improved over its previous budgets due to a significant gain in performance experience and the benefit of understanding the time required for all of its Regional Entity duties. Further, NERC and the Regional Entities spent even more time meeting and discussing the NERC templates and the procedures to be





followed by the Regional Entities in their budgeting process, which improved the consistency of the business plans and budgets.

MRO followed all NERC guidance and templates in preparing its 2009 business plan and budget and was required to obtain MRO Board approval before the final submission to NERC. In addition to process improvements made by NERC for the 2009 business plan and budget process, MRO leveraged improvements made to its time-tracking and financial operations implemented in 2008 to further improve the process for 2009. MRO has and will continue to make improvements to its financial function and it is confident that these changes will enhance future budget requests.

The MRO Board and MRO Finance and Audit Committee (FAC) play an important role in assuring cost accountability for the MRO Regional business plan and budget. MRO FAC reviews the budget requests and evaluates for reasonableness and cost efficiency. MRO staff employed a zero-based budgeting methodology. Each request for resources was evaluated and justified to ensure that resource requests were efficient and matched the departmental plan for the coming year. Once MRO staff and MRO Finance and Audit Committee had reached consensus, the Business Plan and Budget was recommended to the MRO Board of Directors for approval. For the 2009 Business Plan and Budget, the process with the MRO Finance and Audit Committee extended from mid-April 2008 through the end of May 2008. Efficiencies should be gained through experience of staff and MRO Finance and Audit Committee in developing future business plans and budget.

The MRO Board approved the 2009 Business Plan and approved a motion to include comments on the NERC 2009 Business Plan and Budget. The MRO Board is concerned with preventing future sharp increases in the NERC and Regional Entity budget by proactively reducing potential duplications and “scope creep.” The NERC Finance and Audit Committee has also asked NERC and the Regional finance managers to review the idea of joining NERC and the regions in creating a larger buying group which should be able to command more favorable purchasing terms. There have been some informal discussions to gauge interest and expect more formal actions later this year.

MRO staff and the MRO Finance and Audit Committee compare the organization’s statement of activities on a year to date basis each quarter against plan, and explain material variances and emerging trends which may have a material impact on the financials. MRO routinely forecasts expenses for the balance of the fiscal year and performs a monthly closing of its accounts; this ensures that MRO maintains fiscal discipline and vigilance in its adherence to the business plan and budget while performing its responsibilities under the delegation agreement. For 2008, MRO audited actual financials were within 1% of budget, total actual costs and budgeted costs were \$5,325,525 and \$5,331,488, respectively, resulting in an underage of \$5,963.

- 2. State Regional Entity’s assessment of its own effectiveness in developing its business plans and budgets and in the submission of its business plans and budgets in a consistent manner with NERC and the other Regional Entities.**





MRO's effectiveness in developing and submitting business plans and budgets in a consistent manner with NERC and the other Regional Entities has steadily improved with each filing. For all of its submitted business plans and budgets, MRO has followed NERC guidance and templates, attended all scheduled budgeting meetings with NERC and the other Regional Entities, and had numerous discussions with NERC and the other Regional Entities regarding the preparation of the business plans and budgets. As NERC and Regional Entity experience has grown, NERC improved its processes and templates and hosted more discussions with the Regional Entities to try to improve the consistency of the business plans and budgets. Overall, MRO's business plan and budget was very consistent with NERC guidance and the other Regional Entities.

MRO will continue to work with the other Regional Entities to strive for even greater consistency in budgeting and in the creation of uniform metrics. The improvement in the consistency of the nine start-up entity business plans and budgets, as expectations and duties for these entities have continued to evolve over the past two years is encouraging. Due to the varying structures of the Regional Entities, there are differences in how each organization prepares its respective operating budget, however, particularly in light of the October 16, 2008 FERC Order on the 2009 business plans and budgets, the Regional Entities will continue to discuss and harmonize any remaining differences with NERC and each other.

**3. State any proposals of the Regional Entity to improve its effectiveness in submitting effective, adequate and consistent business plans and budgets.**

- MRO suggests that NERC and the Regional Entities use generally accepted accounting principles to increase the level of consistency in the business plans and budgets. Although NERC has required the "cash basis" for reporting its quarterly financials, rather than GAPP, MRO believes that this potentially can mislead the readers of the financials as many would expect the financials to be in accordance with GAAP. Following GAAP and accrual-based accounting would require NERC and each Regional Entity to prepare an operating budget and a separate capital expenditures budget.
- MRO suggests that NERC and the Regional Entities standardize a chart of accounts. Towards that end, MRO adopted the NERC chart of accounts in the last quarter of 2008. MRO further suggests that NERC and the Regional Entities develop and implement a standardized definition and allocation of indirect costs and costing system (e.g. job costing) to track costs for each functional area under Section 215.
- MRO suggests that NERC and the Regional Entities adopt conservative procedures as it relates to accounting and financial management. Although NERC did not require all Regional Entities to establish interest bearing escrow or escrow-like accounts for the collection of financial penalties, MRO believes that these funds should be completely segregated from operating cash until such time as the rules permit them to be used in operations and until any appeals proceedings have been completed. MRO does not believe the creation of such an account is burdensome and, quite the contrary, MRO believes that this makes it much easier to account for these funds and is much more transparent and consistent with the public trust aspect of MRO's responsibilities.
- MRO plans to further enhance its existing time-tracking system with additional details to better track labor and expenses to statutory functions and Registered Entities. Since







well over half of MRO's costs are labor-related, such an enhanced system would be a useful management tool.

- MRO strongly encourages NERC and the Regional Entities to establish annual budget meetings to assure that there is a proper level of delineation of costs between NERC and the Regional Entities. For example, in certain areas, more centralization would occur where common functions can be shared or pooled to be more efficient. Also, a more intimate understanding of costs between NERC and the Regional Entities will prevent unnecessary duplications of costs and efforts.



**ATTACHMENT 4C**

**NORTHEAST POWER COORDINATING COUNCIL, INC.**

**STATEMENT OF ACTIVITIES AND ACHIEVEMENTS**



## **NPCC PERFORMANCE ASSESSMENT Of Activities, Achievements, and Effectiveness in Implementing Delegated Responsibilities**

*The Commission's regulations at 18 C.F.R. §39.3(c) require NERC to "submit an assessment of its performance three years from the date of certification by the Commission, and every five years thereafter." The initial performance assessment report is due to be filed with the Commission by July 20, 2009.*

*Consistent with the FERC regulations and the guidance in FERC's order as quoted above, the principal focus of the Regional Entity's document is on the Reliability Standards Development, and Organization Registration and Compliance Monitoring and Enforcement (OC/CMEP) programs. This performance assessment also includes a less extensive discussion of NPCC's activities in the other four statutory program areas.*

### **INTRODUCTION**

Northeast Power Coordinating Council, Inc. (NPCC) is a New York State not-for-profit membership corporation. 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, (collectively, "regional entity activities"), and (ii) the establishment of regionally-specific criteria, and monitoring and enforcement of compliance with such criteria (collectively, "criteria services activities"). NPCC provides the functions and services for Northeastern North America of a cross-border regional entity through a regional entity division, as well as regionally-specific criteria services for Northeastern North America through a criteria services division.

### **INITIAL SELF-ASSESSMENT AND STAKEHOLDER SURVEY**

On December 29, 2008, NPCC submitted its initial self-assessment to NERC to be posted on the NERC website for industry review. On January 14, 2009 NERC distributed a

survey form to facilitate stakeholders and other interested parties in providing focused input into the performance assessments of NERC and the Regional Entities. NPCC has reviewed the results of that survey and incorporated suggested revisions and enhancements into the future improvement sections of this assessment.

## **Reliability Standards Development**

### **I. *Reliability Standards Development***

- A. *Describe Regional Entity's activities and accomplishments in regional reliability standards development since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007.*

As background, NPCC has had a set of regionally-specific reliability criteria in place for over 43 years to assure the reliability of the Bulk Power System in the international interconnected Northeast. These criteria encompass key aspects of the planning, design and operation of the bulk power system and represent more-stringent and more specific reliability requirements than the NERC Reliability Standards and not inconsistent with those standards. The Full Members of NPCC are obligated through the *NPCC Amended and Restated Bylaws* to abide by these criteria. A Regional Compliance program within the Criteria Services division of NPCC monitors and enforces compliance with these criteria with non-monetary sanctions for non-compliance.

The program to develop NPCC Regional Reliability Standards, therefore, is predicated not on an urgent reliability related need within the region, but on the schedule developed by the ERO in the most current version of the NERC three year standards development workplan. In response to the workplan NPCC has in various stages of development four Regional standards.

- The RSAR for the NPCC Disturbance Monitoring (DM), PRC-002-NPCC-01, regional standard has been drafted and accepted by the NPCC Regional Standards Committee (RSC). The NPCC Reliability Coordinating Committee (RCC) has assigned the drafting task, as outlined in the NPCC Regional Standards Development Procedure, to the Task Force on System Protection (TFSP). The RSAR was also sent to NERC and posted on the Regional Standards Development page. NPCC standards staff will be participating with TFSP during the development of the Regional Standard. A second draft of the standard has been developed and is currently posted in the NPCC open process webpage until July 15, 2009. The Drafting Team is currently reviewing the VSLs and VRFs of the standard with a third and final open process posting expected in the third quarter of 2009. The standard is being coordinated with the continent wide DM standard currently being developed by the ERO.
- The RSAR for the NPCC Underfrequency Load Shedding (UFLS) Program, PRC-006-NPCC-01, regional standard has been drafted and accepted by RSC. The RCC has assigned the drafting task, to the Task Force on System Studies (TFSS). The RSAR was also sent to NERC and posted on the Regional Standards Development page. NPCC standards

staff has been participating with TFSS during the development of this Regional Standard. The standard will be posted in the NPCC open process in July 2009. The standard is being coordinated with the continent wide UFLS standard currently being developed by the ERO.

- The RSAR for the NPCC Special Protection System (SPS), PRC-012-NPCC-01, regional standard has been drafted and accepted by the RSC. The RCC has assigned the drafting task to the TFSP. The RSAR was also sent to NERC and posted on the Regional Standards Development page. NPCC standards staff will be participating with TFSP during the development of the Regional Standard and a technical whitepaper being developed by the TFCP will be utilized in the development of this standard.
- The RSAR for the NPCC Classification of BPS Elements, BPS-501-NPCC-01, regional standard has been drafted and accepted by the RSC. The RCC has assigned the drafting task to TFSS. The RSAR was also sent to NERC and posted on the Regional Standards Development page. NPCC standards staff will be participating with TFSS during the development of the Regional Standard.

NPCC standards staff has also participated in NERC Reliability Standards Workshops to present regional efforts and familiarize the participants with the activities NPCC is engaged in as well as how to participate in the NPCC regional standard development process. NPCC has also held regional workshops and promulgated regional standard development activities and opportunities for stakeholder participation in those forums. In addition, NPCC has participated in a small entity workshop held by an entity representing those entities in an effort to reach out to those who may lack the resources of larger organizations.

Since January of 2007, NPCC has improved operations within the standards area by increasing staff from one Full Time Equivalent (FTE) to 3 FTEs (including contractors) to deal with the increase in workload. The NPCC website was enhanced to facilitate and track standards development, provide a medium for online commenting and immediate verification of those comments, online voting and other features to ensure consistency and adherence to the applicable statutory requirements and ERO required common attributes noted in Exhibit C of the NPCC Regional Delegation Agreement.

Future plans in the NPCC standards program area for continual improvement will include, but not be limited to the following:

- Further enhancements to the website in the area of transparency, ease of use and to improve documentation
- Continued participation and commitment to ensuring consistency with the other Regional Entities
- Close interaction with FERC and Canadian Provincial Regulators and/or Governmental authorities during the Regional Standards development to ensure all regulatory input is considered

- B. *Explain how the Regional Entity has the ability to develop regional standards and has a standards development process that provides for openness, due process and balancing of interests.*

On October 23, 2007 the NERC BOT approved the NPCC Regional Reliability Standards Development Procedure and subsequently on March 21, 2008 the FERC approved the procedure without condition. It was noted in the FERC Order that the commission considers the procedure to be a “rule” and as such the NPCC may not deviate from what is contained therein without re-filing and seeking approval for any such change. NPCC has therefore adhered to the filed and approved procedure and furthermore incorporated generic language in the filed and approved procedure to mitigate recursive filings for changing it. This language allows NPCC to utilize the most current NERC template for standard development and also provides NPCC with the flexibility to utilize the latest protocols regarding Violation Severity Levels and Violation Risk Factors for compliance related matters without the need for re-filing.

The standards portion of the NPCC website was developed specifically to follow NERC’s website format to provide a familiarity to users and also to provide transparency of process and procedure. NPCC will continue to enhance its website to address stakeholder recommendations as they arise and provide uniformity with other Regional Entities as necessary.

NPCC’s mandate as a Regional Entity requires balancing stakeholder interests in much the same way as the ERO. NPCC utilizes segments of stakeholders in a weighted sector voting process that is outlined in the NERC and FERC approved *NPCC Amended and Restated Bylaws* also included in the NPCC Regional Delegation Agreement. NPCC also has a balanced stakeholder RSC whose purpose is to oversee and manage the Regional Reliability Standards Development Procedure and all its associated processes. NPCC utilizes an Open Process commenting process that is available online and allows any user, irrespective of membership in NPCC, to input comments online and immediately verify that they are recorded and viewable. The procedure clearly outlines the steps of development of the regional standards.

NPCC, from its inception, has always had a policy of openness, especially in the area of providing information and allowing comments on Criteria, Guidelines, Procedures, and Directories. That policy extends to the Regional Entity standards area.

Also, NPCC in 2008 began a multiyear project for the development of Reliability Requirements Directories. The main purpose driving the development of these directories is to satisfy NPCC’s obligation to demonstrate that NPCC regional criteria are consistent with the NERC Reliability Standards. The directories are arranged by NPCC criteria “topic” and take the associated mandatory NERC standards along with any NPCC regional standard and provide a consistent comprehensive set of reliability requirements for the Northeast.

The Reliability Requirements Directory document structure accomplishes a number of objectives, including:

- Consolidating all the NPCC guidelines and procedure documents related to the parent criteria document’s topic

- Simplifying searching for pertinent information regarding criteria application into one document, effectively reducing the number of NPCC documents
- Demonstrating consistency with NERC Reliability Standards
- Combining the NERC and any applicable Regional Reliability Standard Requirements into the document.
- Identifying the more stringent NPCC Regional Criteria requirements, while removing any duplicative language that may exist between the NPCC criteria and NERC standards
- Incorporating the latest Functional Model language and identifying the responsible functional entity that is expected to comply, while concurrently retiring the use of the word “Area” (old term used to identify NPCC Control Areas prior to the Functional Model unbundling and identification of individual functions)
- Easing future compliance determinations
- Clarifying and simplifying cross-reference “mapping” between NPCC documentation and NERC Standards Requirements
- Providing opportunities for NPCC to assess need to develop regional standards beyond those specified as part of the NPCC or NERC work plans

The NPCC Directory concepts have been endorsed by the NPCC Board of Directors and NPCC is effectively accomplishing its ERO directives with respect to the criteria consistency issue. NPCC will also be retiring documents that are absorbed and incorporated into the new NPCC Directories, and updating the website to ensure that it includes the latest information along with clarification documentation and archived versions of old documents, should they be required.

NPCC has the manpower resources, tools and procedures in place to effectively and efficiently accomplish its delegated authority to develop Regional Reliability Standards both at the direction of NERC as the ERO, and also in response to other regional reliability related needs.

- C. State Regional Entity’s assessment of its own effectiveness in reliability standards development since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.*

NPCC is in the initial steps of its regional standards development. NPCC has initiated four Regional standards and these standards are being developed in a coordinated manner and predicated on the schedules in the NERC three year standards development workplan and consistent with the NPCC business plan and goals. NPCC is proceeding at a pace necessary to accomplish the objectives of both the ERO and FERC, and to support coordinated standards and regional consistency. NPCC believes that in order for consistency to be achievable there needs to be both coordination between the regions and guidance from NERC on the characteristics of the reliability requirements to be included in the regional standards.

In the area of NPCC's participation in the NERC RS procedure, NPCC has conducted active technical reviews of all posted NERC standards, actively commented and recommended approvals when the draft standards are deemed by the balanced stakeholder RSC to provide an adequate level of reliability for the international, interconnected Northeast. In addition NPCC has representation on all NERC drafting teams and has responded to all requests from the ERO for regional representation, providing this representation with either NPCC member personnel or Regional Entity staff.

*D. State any proposals of Regional Entity to improve its effectiveness in reliability standards development*

During the development of the NPCC "Regional Reliability Standards Development Procedure", NPCC staff reviewed the NERC process in great detail and at that time noted a number of enhancements that could be incorporated into NPCC's procedure. NPCC incorporated these into the NERC BOT approved and FERC filed and approved procedure and has built efficiencies into the process which, because NPCC is dealing with a smaller cross section of the continent-wide number of stakeholders, could be difficult for the ERO to implement. NPCC's Reliability Assessment and Performance Analysis program area has standing Task Forces and Working Groups of technical experts available to supply their expertise in drafting regional standards and reviewing NERC reliability standards. Because of the inclusive nature of its membership, NPCC doesn't have the need to develop separate "ballot pools" for the individual ballots for Regional standards. NPCC also has had an Open Process for commenting that is online which the ERO has used as a model.

On an ongoing basis the most vital resource that will be constrained is that of industry volunteer expertise and continued availability to participate. NPCC standards staff has taken the step to provide the Regional Standard Drafting Team with a first draft of a standard which includes VSLs and VRFs in an attempt to mitigate the time required for drafting. With the open postings in place, NPCC believes that this increases efficiency and allows productivity for the drafting team to begin from the onset and it will result in less meetings and time for the standard to be completed.

NPCC will further its efforts to ensure proper stakeholder notifications for all regional standards activities are publicized through expanded email lists and postings at NERC. In addition all critical NPCC standards development activities such as soliciting for drafting teams, postings of standards, and balloting of standards will be shared with all other Regional Entities and NERC. FERC and applicable Canadian Provincial governmental and/or regulatory authorities have also been invited to participate in regional drafting efforts.

In the future, as an enhancement, NPCC will also have a liaison for compliance provided to the regional drafting team to immediately address and clarify compliance related issues and concerns. NPCC compliance staff will serve in this role.

Further opportunities exist to coordinate with other Regional Entities on "look and feel" of website design and layout for standards related activities. NPCC participates with the other Regional Entities in the NERC Regional Reliability Standards Working Group



(“RRSWG”) which is reviewing opportunities for consistency. This will be of increasing importance once all Regional Entities have developing standards in process and stakeholders with “interest” in multiple Regional Entities have to review multiple websites in differing formats. NPCC standards staff is also participating actively in the Functional Model Working Group and the development of Version 5 of the NERC FM. NPCC has also actively participated in developing the latest revisions to the NERC Rules of Procedure and NERC Reliability Standards Development Procedure Manual currently assigned to the NERC Standards Committee Process Subcommittee. NPCC standards staff will continue to work with the ERO to continually refine and increase efficiency in the NERC standards development area

NPCC standards program area is also participating in the regional standards development activities of MRO, SERC and RFC to ensure consistency, identify any potential adverse reliability related impacts of neighboring regional standards and also to provide coordination. This cross participation will also identify potential additional standards that may hold value to the Northeast which other Regional Entities may be developing.

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

### ***II. Organization Registration and Compliance Monitoring and Enforcement Program***

A. *Describe Regional Entity’s activities and accomplishments in OC/CMEP since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007.*

- *This description should emphasize quantitative information, e.g.: Staffing; numbers of registered entities registered; numbers of workshops, seminars, training and education sessions, etc. conducted; numbers of compliance audits conducted and reports processed; numbers of other compliance processes conducted and processed, e.g., spot-checks, self-certifications, etc.; numbers of notices of violation issued and processed; numbers of mitigation plans processed.*

### **Registration**

The initial 2007 NPCC Compliance Registry was established based on information received in response to Entity Registration Verification Surveys distributed in January, 2007. This survey, developed by NPCC Compliance Staff, requested that each entity that had previously registered as one of the Functional Model entity types, verify that previous registration and provide the most current contact and facility information. In addition NPCC reached out to the New York ISO and ISO New England within the U.S. portion of the region, to identify additional entities that might need to be registered from a reliability perspective that had not registered previously. During 2007 NPCC continued to update the Compliance Registry on a monthly basis and furnished each updated registry to NERC.

To enhance its focus on accurate registration, NPCC in June, 2008 hired a Manager of Compliance Process Development, primarily to oversee the registration process. In August 2008 NPCC issued its second Entity Asset Verification and Registration Survey. This survey will provide updated information to the current registry and will also provide information related to assets owned by each registered entity. The data is being reviewed and the Compliance Registry is being updated on a regular basis to incorporate the results of the survey and any additional changes that have been identified.

In 2009, NPCC has been assessing the registration survey asset information and sending out confirmation letters or registration revision notification letters to the registered entities. NPCC also issued a Compliance Guidance Statement (NPCC-CGS-002, May 4, 2009) on defining generation materiality within the NPCC region. This has identified new entities that will be registered as generation owners and operators within the NPCC footprint. The NPCC registration survey has also been reviewed as a model for the other Regional Entities on collecting bulk electric system asset information from the registered entities.

As of May 31, 2009 the NPCC Compliance Registry contains 267 entities. From a Functional Model perspective, there are some 533 auditable functional components.

### **CMEP Implementation**

NPCC implemented the Compliance Data Administration Application (CDAA) in April 2007. This web-based application is used by registered entities for compliance submittals. The CDAA database is also used by NPCC compliance Staff to review and analyze compliance submittals, and track the progress of mitigation plans. In conjunction with the introduction of the CDAA NPCC conducted 12 in-house training sessions for users of CDAA.

NPCC continues to enhance the CDAA and is a party to the Consortium Users Group (CUG) agreement with five other Regional Entities. This agreement allows for the shared development of the CDAA among the six regional signees. The Regional Entities are currently developing a Compliance Issues Tracking module that will integrate into the NPCC CDAA and will be used to track all aspects of compliance submittals. Among other enhancements introduced by NPCC is the use of electronic signature to expedite the submittal certification process. The CDAA has proved to be a valuable tool in the conduct of the CMEP. Another valuable tool is the NPCC Compliance website. The website was totally redesigned and introduced during the second quarter of 2009. The enhanced website is more user-friendly and provides easier access to data and information related to the Compliance Program.

In July, 2007 the NPCC Board of Directors approved the initial scope of the NPCC Compliance Committee and more recently approved a revised NPCC Compliance Committee scope in February, 2009. The latest revision to the scope reflects changes to the composition and voting mechanism of the Hearing Body, in response to FERC Order Docket No. RR06-1-016. This balanced stakeholder committee reports directly to the NPCC Board and is responsible for providing policy input into the conduct of the CMEP and having a predefined number of its members serve as the Hearing body for any

disputes that may be raised by a registered entity regarding a finding of non-compliance and/or the issuance of a penalty or sanction.

NPCC processed over 500 pre-June 18<sup>th</sup>, 2007 self-reported violations, in response to a pre- CMEP implementation notice from NERC. After review NPCC identified 45 violations and dismissed all other self-reports. However NPCC requested that all self-reported violations have a mitigation plan included with their submittal. All mitigation plans were reviewed and tracked to completion.

NPCC implemented, on June 18<sup>th</sup>, 2007, FERC approved uniform Compliance and Monitoring Program (CMEP). This program is used by NPCC to monitor, assess and enforce compliance to NERC Reliability Standards, post June 18<sup>th</sup>, 2007.

NPCC reviewed, in August 2007, the CIP Implementation survey submitted by all applicable entities. NPCC reviewed all self- certifications submitted by responsible entities in August, 2008. All entities, in NPCC, who were required to be compliant with CIP Standards as of July 1, 2008, were found to be in full compliance.

From January 1, 2008 through December 31, 2008 NPCC processed for each requirement of each monitored standard some 3,529 self-certifications through its CDAA. From January 1, 2009 through May 31, 2009 NPCC has processed 3,296 self-certifications through its CDAA.

NPCC, through its participation on the NERC Regional Compliance Implementation Group (RCIG), provides feedback on various activities related to CMEP implementation. The RCIG has created a number of Working Groups, to be used as forums for the Regional Entities to share their experiences and develop consensus documents or Compliance Guidance Documents (CGD) on different aspects of the CMEP. To date the following Working Groups have been established: the Compliance Monitoring Processes Working Group (CMPWG); the Enforcement, Sanctions and Mitigation Working Group (ESMWG); the Registration Working Group (RWG); the Compliance Information Management Group (CIMG); and the Compliance CIP Management Group (CCMG).

Each of these working groups has representatives from all of the Regional Entities. Compliance issues that achieve consensus and are developed into CGDs are presented to the RCIG for approval and posted to a common Regional Entity supported website (regionalentities.com) so the Registered Entities may use these documents and other information on the website to better understand the requirements of the CMEP. Among some of the issues discussed by the RCIG and the CMPWG include quality of evidence required to meet the requirements of particular Reliability Standards being audited; Reliability Standard Audit Worksheets (RSAWs) clarification and the development of documented compliance applications related to specific Reliability Standards to help improve clarity of Reliability Standards requirements. An example of this is the recent PRC-005 Assessment that was done by the RCIG which looked at previous instances of non-compliance to the Standard, identified key reasons for the non-compliance and suggested process enhancements. The paper was presented to the NERC BOTCC and posted to the above mentioned website.

### **Compliance Audit Program**

NPCC implemented its Compliance Audit Program in June, 2007. The program consists of On-site Compliance Audits, Off-site Compliance Audits, Spot Checks, Compliance Violation Investigations (CVI) and Compliance Inquiry (CIQ). Each On-site Compliance Audit is led by a representative of the NPCC Compliance Staff that has completed the NERC Lead Compliance Auditor Training Program. In addition, the NPCC Compliance Audit Team consists of a number of independent contract auditors, who, subsequent to applicable background checks and execution of code of conduct and conflict of interest statements, work exclusively for NPCC and who all have completed the appropriate NERC Compliance Auditor Training Program. The contract auditors assist the lead auditor in conducting the compliance audit. In addition, NERC Staff, FERC Staff, and as appropriate Canadian Provincial Regulatory representatives have participated on several compliance audits in an observer role. There are no volunteers used on any of the NPCC Compliance Audits.

The Off-site Compliance Audits and Spot Checks are conducted by both NPCC Compliance Staff and/or contract auditors.

The Compliance Audit Schedule, for the next year, is established by September 1 of the prior year and identifies the audited entity, the auditable functional components, and the minimum Reliability Standards to be audited and the date the audit is to be conducted. Registered Entities are given at minimum 60 days notice of an upcoming Off-site Compliance Audit and a minimum of 90 days notice of an upcoming On-site Compliance Audit and are supplied with a comprehensive pre-Audit package of material that includes the appropriate RSAWs for the Reliability Standards included in the audit. This pre-Audit package of material is identical for both the On-site and Off-site Audits.

Each Compliance Audit conducted is accompanied by an audit report that is drafted by the audit team and reviewed by the audited entity. Once finalized, the report is sent to NERC for posting on the NERC website. In addition NPCC posts a public report on its public website.

The schedule for the Spot Check Program is generated for internal NPCC Compliance Staff use only and entities to be spot checked are notified, as per the CMEP, 20 days in advance and requested to supply the necessary information to NPCC for review.

NPCC CVIs are conducted under the NPCC Compliance Audit Program. A CVI is conducted as the result of a thorough review of a system event that determines that there is the possibility of a violation of one or more Reliability Standards. CVIs involve use of NPCC Compliance Staff and may also involve NERC, FERC and Canadian regulatory representatives. Upon completion of the CVI, any identified possible non-compliance issues are handed to the NPCC Compliance Staff Enforcement personnel for further review and determination.

In 2007, NPCC conducted, 14 On-site audits, 20 Off-site Audits and 25 Spot Checks. A report, for each Compliance Audit, was posted to the NERC and NPCC websites.

In 2008 NPCC conducted and completed as scheduled 32 On-Site Compliance Audits; 84 Off-Site Audits and all 238 of its Spot Checks.

In 2009, NPCC is scheduled to conduct 120 off-site audits and 19 on-site audits. This schedule is subject to change based on changes in registration or other factors. Thirteen (13) on-site audits and twenty-five (25) off-site audits have been completed to date. Approximately 200 spot checks will be conducted in 2009.

Through May 31, 2009 NPCC has conducted three CVIs and one Compliance Inquiry (CIQ).

### **Compliance Enforcement**

NPCC Compliance Enforcement is charged with: the identification of instances of non-compliance, the approval and tracking of mitigation plans associated with identified instances of non-compliance, determination of appropriate penalties and sanctions, conduct of settlement negotiations, representing NPCC during the Hearing process and issuing Remedial Action Directives. It has established a notification process, consistent with the NERC CMEP, which includes the issuance of Initial Notices of Alleged Violations (INOAV), Notices of Alleged Violations (NOAV) and Notices of Confirmed Violations (NOCV).

NPCC has identified 72 alleged violations of NERC Standards during the period from June 18<sup>th</sup>, 2007 through May 31, 2009. Of the 72 violations identified: Nine violations, that had preliminary Notices of Alleged Violation (INOAV) issued, were dismissed as a result of further investigation that determined that the entities involved were not in violation of the Reliability Standard for which they had submitted a self-certification; 12 violations have settlement agreements signed; 35 violations are involved in on-going settlement discussions (see below for further details) and one NOAV has been issued. Four NOAV have been accepted and Notices of Confirmed Violation (NOCV) have been submitted to NERC. One NOCV has been issued and a Notice of Penalty (NOP) is to be filed by NERC with FERC; and 12 NOP have been issued by FERC.

Of the 63 violations identified: 34 are associated with CIP-001-1; 17 are associated with PRC-005-1, 7 are associated with FAC-003-1 and 5 are associated with VAR-002-1.

Of the 63 violations identified, 22 were discovered as a result of a Compliance Audit; 13 were discovered through Self-Certification; 23 were discovered through Self-Reporting, four were discovered through Periodic Data Submittals and one was discovered through an investigation.

The 12 NOP that have been issued all have mitigation plans that have been accepted and completed. The one NOCV that has been issued and is pending a NOP to be filed by NERC with FERC has an accepted mitigation plan that has been completed. The four NOAV that have been accepted have been submitted to NERC as NOCV's and all have mitigation plans that have been accepted and completed.

Currently there are 33 violations that are being addressed in settlement discussions. Twelve violations involving four registered entities have Stipulation and Consent Agreements signed and have been submitted to NERC.

On May 29, 2009 NPCC issued a Remedial Action Directive, to an entity, for violations related to FAC-003-1, Transmission Vegetation Management Program.

### **NPCC Summary of Enforcement Activities**

Summary of the number of violations assessed and processed in 2007 through May 31 2009.

<b>Violation Timeframe</b>	<b>Number of Possible Violations Reviewed</b>	<b>Number of Violations With Sufficient Basis</b>	<b>Notices of Alleged Violation Filed (#Violations)</b>	<b>Notices of Confirmed Violation Filed. (#Violations)</b>	<b>Number of Violations Complete</b>
2007 Pre-June 18	537	45	N/A	N/A	45
2007 Post-June 18 through December 31	22	14	13	13	13
2008	39	39	5	5	0
2009 YTD	11	11			

Summary of the number of mitigation plans processed through May 31 2009.

<b>Mitigation Plan Timeframe</b>	<b>Number of Violations with Mitigation Plans Submitted</b>	<b>Number of Violations with Accepted and Approved Mitigation Plans</b>	<b>Number of Violations with Mitigation Plans Certified as Complete</b>	<b>Number of Violations with Mitigation Plans Verified as Complete</b>
2007 Pre-June 18	45	45	45	45
Post-June 18, 2007 TD	9	9	9	9
2008	44	23	22	22
2009YTD	5	7	7	7

#### **CMEP Implementation in Canadian Provinces in NPCC**

To reflect and respect Canadian Provincial laws, the implementation of the NPCC compliance program differs among each of the Canadian entities. In the Canadian provinces within NPCC (Ontario, Québec, New Brunswick and Nova Scotia), compliance monitoring, assessment and enforcement is done based on the terms contained in individual Memoranda of Understanding (MOU) and/or governmental

agreements between each province, NERC and NPCC. These provincial agreements are unique to a particular province and create unique compliance program implementation models.

NPCC has signed MOUs with Ontario, New Brunswick, the Régie in Québec and is reviewing a draft of an MOU between NPCC, the Utility Review Board of Nova Scotia, NSPI and NERC.

In 2008, NPCC conducted an assessment of the New Brunswick System Operator (“NBSO”) Compliance Program as a precursor for the development of the MOU between NPCC, NBSO and NERC. This assessment assured all parties that a comprehensive compliance program was in place in New Brunswick that would be able to support the terms and conditions outlined in the MOU. NPCC also conducted, in 2008 a review of the IESO Compliance Program again to assure all parties that there is a comprehensive compliance program in place to meet all the terms and conditions of the MOU between IESO, NERC and NPCC.

### **Processes and Procedures**

In 2008 the NPCC Compliance Committee (“CC”) created a self assessment process to evaluate the NPCC Compliance Staff’s implementation of the CMEP. A team, made up of stakeholders, conducted three assessments of NPCC Compliance Staff’s implementation of the Registration process, Self-certification process and the On-Site Audit Programs. In 2009 the CC will assess the NPCC Staff’s implementation of the Off-Site Compliance Program, the process used for reviewing, approving and tracking the progress of mitigation plans related to violations of Reliability Standards; and, the process and procedures used for implementing enforcement actions related to violations of Reliability Standards.

During 2008, NPCC developed five internal Compliance Procedure (CP) Documents to aid in the implementation of the NPCC CMEP. CP-01, entitled *Implementation of NPCC Compliance Monitoring and Enforcement Program*, describes in detail the overall implementation of the NPCC CMEP and identifies the sub processes and responsible entities for carrying out the various aspects of the CMEP. CP-02, entitled, *Procedure for On-Site Audits*, describes how NPCC conducts its On-Site Audits. CP-03, entitled, *Procedure for Off-Site Audits*, describes how NPCC conducts its Off-Site audits. CP-05, entitled, *Procedure for Spot Checks*, describes in detail how NPCC does its Spot Checks. CP-06, entitled, *Procedure for Self-Certification and Self-Reporting*, describes how NPCC implements Self- Certification and Self – Reporting.

Additional CP documents are being developed to cover other aspects of the CMEP such as Violation Notification Process, Hearing Process and Settlements. Each CP document is developed consistent with the NERC CMEP and Rules of Procedure. All CP documents are approved by the NPCC Compliance Committee and are available on the NPCC website. NPCC is also planning to create a set of internal staff Compliance Instructions (CI) to support each of the CP documents developed.

### **Compliance Workshops**

NPCC has conducted two compliance workshops in each of the past two years. In 2007 NPCC conducted a workshop on April 25<sup>th</sup> that focused on introducing the CMEP and

how it was to be implemented in a post June 18<sup>th</sup> environment. This workshop also introduced the concept of using on-line tools to assist registered entities in the implementation of the CMEP. On November 14 and 15<sup>th</sup>, 2007 NPCC held its second workshop of the year. This work shop focused on the early observations of and lessons learned from the implementation of the CMEP post June 18<sup>th</sup>, 2007. The workshop also included a User's Group Forum on use of CDAA, NPCC's on-line compliance application and a mock hearing, conducted by an NPCC Hearing Officer, which demonstrated the NPCC Hearing process.

In 2008 NPCC held a compliance workshop on May 12-13 and focused on the integration of the Critical Infrastructure Protection (CIP) Standards into the CMEP and once again presented lessons learned from implementation of the CMEP in the areas of Registration, Compliance Audits and Enforcement. The second 2008 compliance workshop was held on November 12-13, 2008 and introduced a new format that focused on registered entity input and featured stakeholder led break out sessions that identified key concerns regarding CMEP implementation. These concerns were then presented to the NPCC Compliance Staff for discussion and the development of an action plan to address these issues.

At its May, 2009 Compliance Workshop, NPCC continued its focus on stakeholder concerns by maintaining and enhancing the workshop format adopted in November 2008, that emphasized stakeholder identification of key issues. The May, 2009 workshop was expanded in length to allow for further discussions of these stakeholder identified issues and was the most attended workshop to date.

### **Staffing**

In January 2007 the NPCC Compliance Staff consisted of three full time positions – Assistant Vice President - Compliance, Manager of Compliance and a Senior Compliance Engineer. During the first half of 2007 the Compliance Program Staff was restructured and additional personnel were hired to fill two newly created positions – Manager – Compliance Audit Program and Manager – Compliance Enforcement. In addition the Manager - Compliance title was changed to Manager – Compliance Program Implementation and more clearly defined roles and responsibilities were developed for each of the three manager positions. To support the managers two Associate Compliance Engineers were also hired during 2007 and a number of contract Compliance Auditors were retained. In 2008 the NPCC Compliance Staff added a Manager-Compliance Process Development and a Senior Compliance Engineer. In 2009, to date, a Compliance Analyst and Compliance Specialist, with expertise in physical security, have been added to the NPCC Compliance Staff.

The Compliance Specialist, added to existing CIP qualified Compliance Staff members and contract auditors with CIP expertise, provides NPCC with a thorough and highly qualified team to conduct the required CIP Compliance Audits which began in April, 2009.

- B. Describe how the Regional Entity has the ability to enforce reliability standards and to provide for an adequate level of bulk power system reliability in its Region.*



Through its Regional Delegation Agreement with NERC, NPCC has been charged with enforcing Registered Entities' compliance with NERC Reliability Standards. Historically, NPCC included in its membership agreements the requirement to adhere to its regionally-specific Criteria in order to assure bulk power system reliability. NPCC administered a "voluntary compliance program" for many years using its membership approved Criteria as its set of reliability requirements and has monitored, assessed and enforced adherence to these Criteria through non-monetary sanctions. Implementing the CMEP is the latest addition to this culture of compliance.

Conducting a comprehensive and rigorous CMEP focused on enhancing reliability, assures that the registered entities within the region understand the Reliability Standards, the consequences associated with failure to meet these standards and most importantly that adherence to the reliability standards translates directly to a more reliable bulk power system. The descriptions provided in "A" above demonstrate many of the processes and procedures that have been implemented since 2007 to accomplish the effective implementation of the CMEP.

*C. Describe how the Regional Entity has fair and impartial procedures for enforcing reliability standards.*

NPCC has adopted and implemented the NERC uniform CMEP, which provides fair and impartial procedures for enforcing reliability standards. NPCC Compliance Staff presents program related implementation procedures to its Compliance Committee for approval. This committee is a balanced stakeholder committee made up of sector representation that is consistent with the make up of the stakeholder NPCC Board of Directors. By involving members from all sectors in the process NPCC is assured that decisions made by the CC are fair and impartial.

*D. State Regional Entity's assessment of its own effectiveness in OC/CMEP since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed*

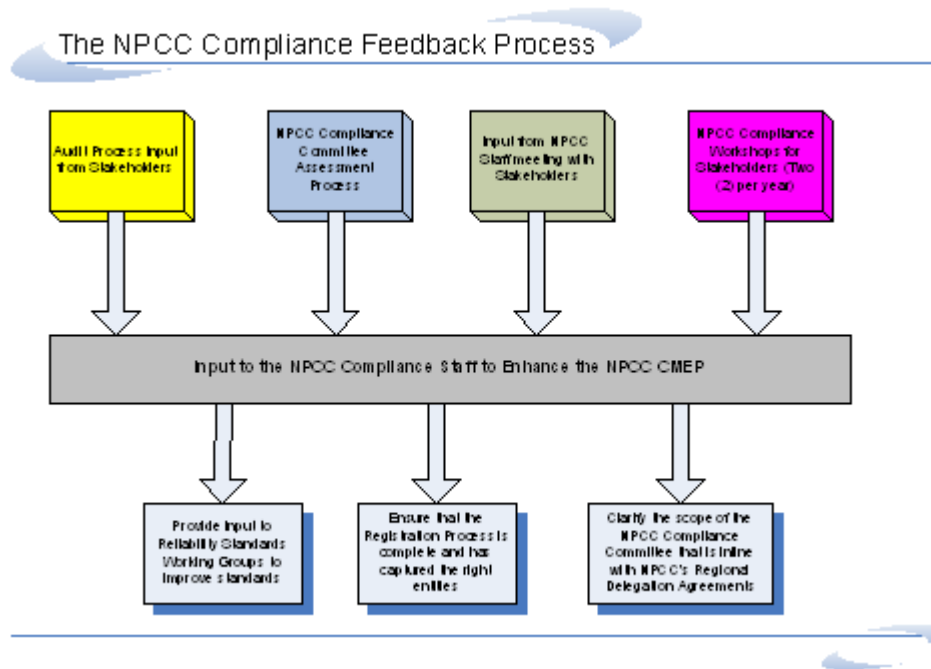
NPCC has implemented a self-assessment process conducted under the stakeholder Compliance Committee. These assessments evaluate the implementation of various parts of the CMEP and make recommendations for improvement. These recommendations are then reviewed by the NPCC Compliance Staff and implemented. The Compliance Committee is charged with tracking the progress on the implementation of the CC recommendations.

This self assessment process has helped enhance the effectiveness of the implementation of the CMEP, especially from the beginning of the program in June 2007. In addition, there are many other reasons for the improvement, including: the greater knowledge gained by actually implementing the program, the enhancement to the tools used to implement the CMEP-especially the CDAA, the use of direct feedback from the registered entities and the sharing of their experiences through many means including the compliance workshops, direct contact via the phone or email and via direct face to face meetings.

*E. State any proposals of Regional Entity to improve its effectiveness in OC/CMEP.*

To improve the effectiveness of its implementation of the CMEP, NPCC conducted a survey in mid – August 2008 to re-verify the registration of entities. The results of this survey will assure that the proper entities are registered and that the data associated with these entities is as accurate as possible. NPCC continually reviews the NERC Statement on Registration Criteria and provides its input and feedback based on the experiences it has had during the conduct of its registration process. NPCC is continually striving to assure that the proper entities are registered and willingly shares its experiences with other Regional Entities.

The NPCC Compliance Committee has endorsed a feedback process shown below:



This process utilizes feedback obtained from the various “inputs” depicted above including: Audit process; Compliance Committee Assessments; direct contact with registered entities and Compliance Workshops. This input is then used, by the NPCC Compliance Staff, to: provide input to Reliability Standards Working Groups to improve standards; ensure proper registration; and, to potentially modify the scope of the NPCC Compliance Committee.

NPCC participation on various NERC groups such as the CCC, RCIG and its supporting Working Groups plays a tremendous role in improving the effectiveness of the CMEP implementation. By sharing information among the Regional Entities and coming to consensus on issues, a more consistent application of the CMEP can be achieved across all the Regional Entities. To this end NPCC is supporting the development of the Regional Entity informational website – established to furnish registered entities with consensus information related to the CMEP implementation.

In addition, NPCC is working on the development of Key Performance Indicators (KPI) related to the CMEP. The NPCC Compliance Committee approved an initial set of indicators that will include performance target goals, summaries of performance and action steps to improve compliance performance. The development of these metrics is being shared among the Regional Entities and hopefully these metrics will become a very useful tool in the implementation of the CMEP.

NPCC continues to reach out to governmental and/or regulatory authorities to assure that the most current directives from the regulatory authorities are being used during the conduct of the CMEP. As an example, the NPCC Compliance Staff has participated in FERC Enforcement and Compliance related technical conferences and workshops and have found them to be valuable in obtaining insights into the most current thinking of the FERC staff.

## **Other Program Areas**

### ***III. Other Program Areas***

#### ***A. Reliability Readiness Evaluation and Improvement Program***

The Reliability Readiness Evaluation and Improvement Program was established following the 2003 blackout as a collaborative program conducted by the Regional Entities and NERC to assesses the readiness of the operational entities to oversee the reliable operation of the bulk power system. The first such on-site evaluations were conducted during the spring of 2004. Each Reliability Coordinator within the footprint of the 2003 blackout received a Readiness Evaluation to ensure its ability to continue to conduct reliable operations going into the summer of 2004. From this initial post-blackout initiative, the Readiness Evaluation program expanded into on-site operational reviews of all operating centers, including those of Transmission Owners, with almost seventy evaluations carried out annually.

Readiness evaluations were conducted on a three-year cycle for the Reliability Coordinator, the Transmission Operator, the Transmission Owner and the Balancing Authority. The NERC Reliability Readiness Evaluation and Improvement Program was expanded to promote excellence in operations by establishing a dialogue between the review team and the entity being reviewed and by providing a forum for the exchange of ideas and the identification of opportunities for improvement and examples of excellence. The Reliability Readiness Evaluation team itself consisted of industry volunteers with the necessary technical expertise, with a member of the NERC staff and the applicable Regional Entity assuming the lead for each evaluation team. Reliability Readiness Evaluation activities were conducted on-site at the locations of the evaluated entities. The full evaluation team prepared, and concurred in the preparation of, a final report summarizing the conclusions and observations of the audit team, and, when finalized, it was made publicly available on the NERC website.

1. *Describe Regional Entity's activities and accomplishments in Reliability Readiness Evaluation and Improvement since January 1, 2007, including discussion of improvements in this area.*

NPCC has been an active participant in the efforts of the NERC Reliability Readiness Evaluation and Improvement Program since its inception. For calendar year 2007, NPCC Staff served as the co-team leader for two Readiness Evaluations within NPCC. In addition, NPCC participated in four external Audits in 2007.

In 2008, NPCC served as the co-team leader for five Transmission Owner reviews within NPCC.

2. *State Regional Entity's assessment of its own effectiveness in Reliability Readiness Evaluation and Improvement since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.*

NPCC believes that the NERC Reliability Readiness Evaluation and Improvement Program was an effective short term tool with which to ensure operating reliability of the bulk power system following the blackout of August 14<sup>th</sup>, 2003. However, following the initial series of evaluations, its value became very limited as the compliance program better served the function. The Readiness Evaluation program also became a significant drain on industry manpower as compliance activities became more numerous, and, further, as the Readiness Evaluation program was extended to the Transmission Owner level.

With the implementation of mandatory compliance and the extensive, in-depth compliance audits which the program brought to the industry, NPCC agreed with the conclusion of NERC that the imposition of mandatory compliance had superseded the value of the Readiness Evaluation program, and, accordingly, the Readiness Evaluation program should cease at the end of 2008.

For 2009, the Business Plan and Budget of the NERC states that the Reliability Readiness Evaluation and Improvement Program will complete remaining scheduled readiness reviews and close by the end of the first quarter of 2009. Within NPCC, all Reliability Readiness Evaluation and Improvement Program evaluations were concluded by December of 2008; none extend into the first quarter of 2009.

3. *Discussion of proposed improvements to reliability readiness is not needed, since the NPCC evaluations were completed by the end of 2008 and this program is being phased out by NERC in the first quarter of 2009.*

**B. Training, Education and Operator Certification**

1. *Describe Regional Entity's activities and accomplishments in Training, Education and Operator Certification since January 1, 2007, including discussion of improvements in this area.*

In NPCC, the training, education and operator certification activities are coordinated by the CO-2, System Operator Training Working Group, which is overseen by the Task Force on Coordination of Operation.

During 2007 and 2008 NPCC has provided four high-quality continuing education seminars for system operators and dispatchers in the five NPCC Balancing Authority Areas (“Areas”). The attendees at these seminars have attained Continuing Education Hours (CEHs) and material from seminars has been incorporated in Area training programs to allow for the attainment of CEHs for all system operators in those Areas. Content of those seminars has included extensive presentations on wind power additions with discussions on operations concerns with wind generators, review of system disturbances both in the NPCC Areas and for major disturbances outside of NPCC for lessons learned, industry and NPCC changes, changes in NPCC criteria and procedures and NERC standards, compliance and compliance violation investigations, new facility additions and seasonal assessment summaries. Specific learning exercises have included table top exercises on system restoration and operator communications. Quality of the exercises, presentations, topics and participation has shown on-going improvement.

During October 2008 a Coordinated Restoration Exercise was conducted by system operation and training staff among the NPCC Areas and PJM. A review of how the exercise went was conducted during the November 2008 System Operator Seminar.

Other accomplishments in the Training, Education and Operator certification program during the time since January 1, 2007 through May 31, 2009 include:

- Reviewed NPCC and NERC document changes that relate to system operation.
- Shared training sources that can be referenced to obtain on-the-job and computer-based training.
- Exchanged among NPCC Areas operator training methods, sources of new methods and techniques plus web sites with associated information.
- Compiled detailed lists of Bulk Electric System (BES) company-specific reliability-related tasks and corresponding descriptions for tasks performed by NPCC Area System Operators. This also involved verification that each System Operator has the capability to perform new or modified tasks.
- Carefully reviewed the still under development NERC PER-005, “System Personnel Training” standard content. The NPCC Area training programs have been reviewed to determine impacts that the new standard content will have and if any changes are needed to the programs.
- Reviewed NPCC Area certification training needs and whether additions to existing programs are needed.
- Simulator software was shared among Areas—This may affect training methods that provide a large number of Continuing Education hours for NPCC Area system operators.
- Reviewed 2007 and 2008 attainment for system operators in the NPCC Areas of CEHs.

2. *State Regional Entity's assessment of its own effectiveness in Training, Education and Operator Certification since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.*

The Training, Education and Operator certification program has increased effectiveness during the time since January 1, 2007. Areas of increased emphasis included:

- Restoration exercises and drills.
- Communication among operators and use of communications improvement drills.
- Review of NPCC and NERC document content and changes and how they may impact existing training programs.
- Consideration and use where possible of sharing of training program content and sources for new content among the NPCC Areas to improve efficiency and effectiveness.
- Exchanged among NPCC Areas operator training methods, sources of methods and techniques plus web sites with associated information.

3. *State any proposals of Regional Entity to improve its effectiveness in Training, Education and Operator Certification.*

In 2009, NPCC is increasing the emphasis on training relating to the inter-relationship between NERC Standards, Regional Standards, Market Rules, and Business Practices. NPCC will conduct an autumn training seminar at which potential operational problems for the coming season are identified, the implementation of NPCC operations-related directories, standards, criteria and procedures are discussed, significant disturbances are reviewed for lessons to be learned and “table-top” exercises and drills and event simulations are conducted. (The scheduled Spring training seminar was cancelled due to travel restrictions in response to the pandemic.)

NPCC will also evaluate and propose new techniques and training aids as they become available and will seek ways to share training methods and sources. Considering ways to continue and enhance these activities are part of the scope of the CO-2 Working Group activities.

NPCC continues to stress coordinated, wide area system restoration exercises. In conjunction with the 2009 autumn system operator training seminar, all five NPCC Areas, together with the Midwest ISO and PJM, will participate in a wide area “August 14<sup>th</sup>” restoration simulation containing the introduction of numerous problem scenarios to be addressed in the course of the drill.

Where achievable NPCC will consolidate training among the NPCC Areas in the development of course work accredited for Continuing Education Hours. As part of this activity, internal training method and techniques will be exchanged, whenever feasible.

In addition, NPCC will identify and establish any necessary training requirements which may result from the entity certification process.

In 2009 NPCC is reviewing the NERC standard PER-005 content. In accordance with PER-005 NPCC will: 1) update the NPCC Area list of BES company-specific reliability-related tasks performed by its system operators to identify new or modified tasks for inclusion in training, 2) review design and development of learning objectives and training materials based on the task list and 3) conduct an evaluation of the training programs to verify each system operator's capabilities to perform each assigned task identified.

### ***C. Reliability Assessment and Performance Analysis Program***

NPCC coordinates operation and planning among the NPCC Balancing Authority Areas and NERC to enhance the reliability of the interconnected bulk power system, including the development of operating procedures affecting the reliability and operability of interconnected power systems. NPCC has established the Reliability Coordinating Committee (RCC) as the top technical committee to integrate the "deliverables" of several NPCC programs.

Seasonal assessments of the overall NPCC resource adequacy assessments are performed and possible actions to mitigate any potential problems are identified. NPCC reviews operations and disturbances both internal and external to the Region in order to identify any lessons to be learned and recommends any necessary follow-up actions.

If appropriate, enhancements to Regional Standards or NPCC's more stringent, regionally specific reliability requirements are also recommended. NPCC promotes and conducts both inter-Area and interregional studies to enhance reliability and operational effectiveness, and provides a forum for the discussion and coordination of operating issues within the NPCC Areas and with other Regions.

#### ***1. Describe Regional Entity's activities and accomplishments in Reliability Assessment and Performance Analysis since January 1, 2007, including discussion of improvements in this area.***

Perhaps the most significant action in this Program Area for 2007 was the decision to move forward with the development and technical review of the NPCC Reliability Requirements Directories. The Directories consolidate the existing NPCC A, B, and C documents into a format consistent with the NERC Standards, linking the NPCC requirements to the related NERC standards. This provides a combination of measurable compliance elements from the ERO standards with the implementation specifics of the NPCC criteria.

Reliability Requirements Directory No. 7 – Special Protection Systems was reviewed and approved by the RCC in November 2007.

#### **2007 Summary**

The following reliability assessments and reviews were approved:

- ✓ The 2006 assessment of Under Frequency Load Shedding adequacy

- ✓ The 2007 summer and winter pre-seasonal assessments
- ✓ The 2007-2009 NPCC Tie Benefits Report
- ✓ 5 Interim or comprehensive Area transmission reviews
- ✓ 4 Interim resource adequacy reviews
- ✓ 5 new or amended Type 1 Special Protection Systems
- ✓ Guidelines for consistent interpretation of Critical Assets in the context of NERC's Critical Infrastructure Protection Standards, and
- ✓ The 2008-2009 work plans of the Reliability Coordinating Committee and its Task Forces

NPCC reviewed the extent to which the NPCC members expect to be able to reliably operate the bulk power system during a pandemic. The results were favorable and demonstrated NPCC preparedness. .

NPCC also initiated event analyses of 10 major system incidents.

### **2008 -2009 Summary**

Continuing the efforts initiated in 2007, NPCC has approved the following through May 31, 2009:

#### **Directory Support**

- ✓ Directory #3 – Maintenance Criteria for Bulk Power System Power System Protection (A-04) be submitted for Full NPCC Membership approval and subsequent retirement of NPCC Documents A-4 and Document B-23, whose contents have been incorporated in the Directory
- ✓ The technical content of the A-04 Document (Maintenance Criteria for Bulk Power System Protection) as amended, recommending NPCC membership approval as a criteria document in Directory #3
- ✓ The technical content of the A-13 Document (NPCC Verification of Generator Gross and New Real Power) as presented, recommending NPCC membership approval as part of Directory #9
- ✓ The technical content of the A-14 Document (NPCC Verification of Generator Gross and New Reactive Power) as presented, recommending NPCC membership approval as part of Directory #10
- ✓ Directory #8 – System Restoration and Directory #2 – Emergency Operations Criteria be submitted for Full NPCC Membership approval, with subsequent retirement of the referenced NPCC Criteria Documents whose contents have been incorporated in the Directory.
- ✓ Directory # 9 – Verification of Generator Gross and Net Real Power Capability (Document A-13) for NPCC Membership ballot
- ✓ Directory # 10 – Verification of Generator Gross and Net Reactive Power Capability (Document A-14) for NPCC Membership ballot
- ✓ Directory # 12 (UFLS Program) and Directory # 2 Revision to be submitted for Full NPCC Membership approval
- ✓ Directory # 3 (Revised Maintenance Criteria for BPS System Protection) to be submitted for Full NPCC Membership approval



### **Regional Standards Support**

- ✓ Task Force on Coordination of Planning to initiate the drafting of the NPCC Regional Standard for the Classification of Bulk Power System Elements (BPS-501-NPCC-01)
- ✓ Assignment of the Task Force on System Protection as the Lead Task Force to initiate the drafting of the proposed NPCC Disturbance Monitoring Regional Standard PRC-018-NPCC-01
- ✓ Assignment of the Task Force on System Studies as the Lead Task Force to initiate the drafting of the proposed NPCC UFLS Program Regional Standard PRC-006-NPCC-01
- ✓ Assignment of the Task Force on System Protection as the Lead Task Force to initiate the drafting of the proposed NPCC Special Protection Systems Regional Standard PRC-012-NPCC-01

The following Reliability Assessments and Reviews have been completed through May 31, 2009:

### **Transmission Reviews**

- ✓ The 2007 New York Interim Transmission Review
- ✓ The 2007 Québec Comprehensive Area Transmission Review
- ✓ The 2007 Ontario Comprehensive Area Transmission Review
- ✓ The 2008 Ontario Interim Transmission Review
- ✓ The 2008 Québec Interim Transmission Review
- ✓ The 2008 New York Intermediate Transmission Review
- ✓ The 2008 Maritimes Intermediate Transmission Review

### **Resource Adequacy Reviews**

- ✓ The 2007 New England Interim Review of Resource Adequacy
- ✓ The 2007 Québec Interim Review of Resource Adequacy
- ✓ The 2007 Maritimes Comprehensive Review of Resource Adequacy
- ✓ The 2007 New York Interim Review of Resource Adequacy
- ✓ The 2007 Ontario Interim Review of Resource Adequacy
- ✓ The 2008 New England Comprehensive Review of Resource Adequacy
- ✓ The 2008 Maritimes Interim Review of Resource Adequacy
- ✓ The 2008 Québec Comprehensive Review of Resource Adequacy

### **Special Protection Systems**

- ✓ Removal of the Type 1 Special Protection System #132
- ✓ Hawthorne Type I Special Protection System (SPS)

### **Assessments & Reports**

- ✓ The 2008 NPCC Regional Reliability Plan
- ✓ The NPCC Underfrequency Load Shedding (UFLS) Assessment, including the parameters for modifying the NPCC UFLS program to meet the specified performance requirements with a cost estimate and implementation plan.
- ✓ March 29, 2006 St. Lawrence Disturbance Report
- ✓ February 4, 2008 Review of the Québec-Ontario Inadvertent Synchronization
- ✓ July 17 & 21, 2008 Review of the Québec Vegetation Contact Events
- ✓ Disturbance Report - July 24, 2008 New England – Maritimes Separation

- ✓ Disturbance Report - September 24, 2008 New England – Maritimes Separation
- ✓ Disturbance Report – October 25, 2008 Nicolet SPS Misoperation
- ✓ Disturbance Report – January 2, 2009 Loss of Micoua Transformer - Québec
- ✓ Disturbance Report-March 11, 2009 New York -Québec Synchronization
- ✓ NPCC 2008 Pre-Seasonal (Summer/Winter) Reliability Assessment(s)
- ✓ NPCC 2009 Pre-Seasonal (Summer) Reliability Assessment(s)
- ✓ TFSP Bulk Power System Risk Assessment
- ✓ Wind Modeling in Resource Adequacy Assessments White Paper
- ✓ Governor Modeling White Paper

2. *State Regional Entity’s assessment of its own effectiveness in Reliability Assessment and Performance Analysis since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.*

As demonstrated by its actions detailed above, NPCC has been diligent in its activities to assure reliability in this Program Area.

3. *State any proposals of Regional Entity to improve its effectiveness in Reliability Assessment and Performance Analysis.*

As the power system in northeastern North America changes there will be different reliability challenges to face, for example, reliably integrating more inherently variable power sources such as wind generation, or reliably utilizing the anticipated amounts of Demand Response expected in the future. New stresses on the system will occur as a consequence of these and other system changes. NPCC is dedicated to having the necessary analyses, assessments and corresponding recommendations in-place.

NPCC, through its various Task Forces and Working Groups will continue to improve the quality of its Regional reliability assessments by considering incorporation of risk assessment techniques into its and NERC’s longer-range future reliability assessments.

NPCC will expand the role of the NPCC Governmental/Regulatory Affairs Advisory Group by offering additional opportunities for interested parties and governmental/regulatory officials to discuss concerns on important emerging reliability issues such as those related to resource adequacy, energy scenarios, regulatory proceedings, transmission and generation projects, and smart grid technologies, for example. Teleconferencing and WebEx format meetings will be utilized, to reach as wide of audience as possible. Current NPCC Governmental/Regulatory Affairs Advisory Group lists 50 individuals from 36 organizations.

Eight meetings of the Governmental/Regulatory Affairs Advisory Group have been held through May 31, 2009. The most recent meeting (held via WebEx on May 21, 2009) included presentations on the proposed NPCC 2010 Business Plan & Budget, the proposed New York City – Long Island Wind Power project, the Ontario “Green” Economy Act, and the Ontario Feed-In Tariff, and the DOE 2009 Congestion Study.

All materials of the Governmental/Regulatory Affairs Advisory Group are posted on the NPCC public website at: <http://www.npcc.org/relServices/GovReg.aspx>.

NPCC will continue to encourage NPCC stakeholder participation in the balanced voting Committees, Task Forces, and Working Groups to ensure that all stakeholders are considered for their inputs and concerns before establishing various courses of action.

Based on the feedback received from FERC staff, a summary of the issues related to changing from the reliability impact performance based Bulk Power System (BPS) definition, to a 100kV and above definition of Bulk Electric System (BES) was provided to the RCC at their May 2008 meeting. The RCC has been charged by the NPCC Board to provide a recommendation by September 20, 2009.

The RCC continues to review the activities of the NPCC Joint Task Force Chairs in pursuit of the NPCC Board's BES assessment, providing additional guidance on questions received on the proposed BES definition, schedule, and the economic and reliability analyses. In addition, WECC's current activities to clarify the definition of the term "Bulk Electric System" are also being monitored. An informational status report of NPCC's activities to date was filed with FERC on June 5, 2009; a status report was also sent to the affected US registered entities on June 12, 2009.

#### ***D. Situation Awareness and Infrastructure Security Program***

The Situation Awareness and Infrastructure Security Program is the combination of near real time awareness of conditions on the bulk power system with the programs necessary to increase the physical and cyber security of the electricity infrastructure. This includes the operation and maintenance of tools and other support services for the benefit of Reliability Coordinators and other system operators. Maintaining the real-time awareness of conditions on the interconnected bulk power systems of the NPCC Reliability Coordinator Areas (including awareness of abnormal events, communicating information concerning system conditions and abnormal events to, and facilitating real-time communications among, system operators responsible for the reliable operation of the bulk power systems) is critical to maintaining reliable operation within NPCC.

On an ongoing basis, NPCC monitors the operational status of the bulk power system and coordinates normal and pre-emergency communication, awareness and assistance in addition to the same during an emergency among the Areas. The industry is notified of significant bulk power system events that have occurred in one Reliability Coordinator Area, and which have the potential to impact reliability in other NPCC Reliability Coordinator Areas or Regional Entities external to NPCC. These events include contingencies on the bulk power system, potential shortfalls of operating reserve, operating problems, potential security threats and potential threats or disruptions to the cyber systems of the Reliability Coordinator Areas.

To assist in the evaluation of emerging tools to better identify evolving system conditions, NPCC actively coordinates the utilization of existing operational aids, and the implementation of new operational aids, including the Area Control Error (ACE) and Frequency Monitoring System; the NERC Hotline; Real-time Flows; the System Data Exchange (SDX); the Reliability Coordinator Information System (RCIS); the Transmission Services Information Network (TSIN); the Interchange Distribution Calculator (IDC); the interregional Security Network (ISN); and the Central Repository for Security Events (CRC).

*1. Describe Regional Entity's activities and accomplishments in Situational Awareness and Infrastructure Security since January 1, 2007, including discussion of improvements in this area.*

The events of September 11, 2001 renewed the focus on potential threats to the physical infrastructure of the electric power system. In response, the NPCC System Operations Managers Working Group (CO-8) has in place the availability for 24 x 7 conference calls among the NPCC Reliability Coordinator Area managers to address security threats within NPCC and the proper operating posture in response to such threats. A drill simulating the NPCC Security Conference Call is held among the control room managers on at least a monthly basis; the drill is conducted at random times.

The NPCC Emergency Preparedness Conference Call mechanism is a tool that has been put in place that enables the Reliability Coordinator Area Operations Managers in NPCC, and, as required, their counterparts in neighboring Regional Entities, to rapidly communicate the status of current operating conditions and facilitate the procurement of assistance during emergency conditions. Items of particular concern that can be discussed during the Emergency Preparedness Conference Calls may include, but are not limited to, the following:

- anticipated weather only as it is critical to the system or systems experiencing or projecting resource deficiencies
- load forecast
- largest first and second contingencies
- potential need for emergency transfers
- operating reserve requirements and expected available operating reserve capacity deficiencies
- potential fuel shortages or potential fuel supply disruptions which could lead to energy shortfalls
- identified or projected voltage conditions
- status of short term contracts and other scheduled arrangements, particularly those that impact operating reserves
- additional capability available within four hours and additional capability available within twelve hours
- coordination of pumping schedules
- any problems that might develop due to light load and minimum generation requirements
- generator outages that may have a significant impact on an adjacent Area or neighboring system
- transmission outages that may have an adverse impact on internal and external energy transfers
- expected transfer limits and limiting elements
- anticipated implementation of NERC Transmission Loading Relief (TLR) procedures or Lake Erie Emergency Redispatch (LEER) procedures
- the temporary modification or changes in the status of relay protection systems such that the normal levels of protection will not be provided
- the arming of special protection systems not normally armed
- the application of abnormal operating procedures

NPCC has also established a daily conference call to serve as a complement to the NPCC Pre-Emergency Conference Call and the Weekly Conference Call. The participants of the call are the control rooms of the Midwest ISO, PJM, New Brunswick System Operator, ISO New England Inc., the New York ISO, Hydro-Québec, and the Independent Electricity System Operator and NPCC Staff. The conference call is implemented through a bridge, the initiation of the call quickly ringing all pre-selected telephones simultaneously. The goal of the call is to alert all neighboring Areas of emerging problems. If no system difficulties are anticipated for the day, no unnecessary information is to be discussed. Subjects for discussion are limited to credible events which could impact the ability of an Area to serve its load and meet its operating reserve obligations or would impose a burden to the interconnection, including the following:

- Projected Load
- Adverse Weather
- Operating Reserve
- Generation
- Transmission
- Sabotage

If conditions worsen in the course of the day, the NPCC Pre-Emergency Preparedness Conference Call will be held among the NPCC Reliability Coordinator Area Control Room Managers.

NPCC has actively participated in the NERC-FERC operational awareness initiative. At the request of the United States Federal Energy Regulatory Commission (FERC), the Reliability Coordinators are developing procedures to provide to the FERC near-real time overviews of operating information for their respective footprints. The intent of the effort is to permit the FERC to “measure the health” of the Interconnections and to monitor parameters which may warn of a developing crisis. The project is proceeding in two phases. The initial phase has established, on a daily basis, the dissemination of a spreadsheet projecting basic operating information, including projected load, projected weather at the time of the system peak, the peak load for the previous day, the aggregate generation unavailable and the numbers of key transmission lines unavailable.

For the second phase, NPCC has implemented a geographically based visualization of selected reliability indicators to expand the operational awareness of the Reliability Coordinators (RC) of NPCC, providing an enhanced wide area view of each of the five RC footprints in the Northeast and permitting the Reliability Coordinator to make more informed real-time operating decisions. The display went into service on June 1, 2009.

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

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

Each screen displays the following data:

- Reliability Coordinator Area load;

- Reliability Coordinator Area Control Error (ACE);
- scheduled net interchange with its neighboring Reliability Coordinator Area;
- actual net interchange and limits with its neighboring Reliability Coordinator Area;
- key interface loadings with limits;
- system frequency at selected locations in each Reliability Coordinator Area; and
- key bus voltages with typical operating range.

Historical data is displayed for the past four hours or the past twenty-four hours as selected by the viewer. Arrows will indicate interface flow and direction, and the color of the arrow changes as the loadings increase (Green will indicate normal loading levels; at 80%, the color will change to yellow and ultimately red.).

To ensure the capability for continued voice communications among NPCC and its Reliability Coordinators, a satellite telephone network has been established and tested. This back-up communications system will function in the event of a collapse of the Public Switched Telephone Network (PSN), and cross-border voice communications can still be maintained among the Canadian Reliability Coordinators of NPCC and the Reliability Coordinators in the United States.

NPCC is initiating the identification of needed enhancements to operational tools suggested by the final report of the NERC Real-time Tools Best Practices Task Force through an internal survey of NPCC Reliability Coordinators, Balancing Authorities and Transmission Owners.

NPCC has finalized a consistent and standard methodology to guide the formal peer review of Reliability Coordinator Area restoration plans. Such a review will be conducted annually to ensure that each Reliability Coordinator's restoration plan remains current and viable.

NPCC has developed a proposed methodology through which inter-Area reserve may be secured as a market product.

NPCC has established an internal system for the dissemination to the appropriate contact of a NERC Alert with respect to cyber and physical threats. The Alert will be directed to the personnel within NPCC who can promptly adopt the necessary mitigating actions. NPCC is working with other Regional Entities to develop such a tool throughout the grid.

NPCC has completed its events analysis of numerous system disturbances from which operating lessons may be learned, some of the most important of which include:

- the St. Lawrence event of March 29, 2006
- a survey of the shunt capacitor installations in NPCC vulnerable to the excessive Rate of Rise of Recovery Voltage (RRV) demonstrated by the Richview disturbance of January 30, 2007, and the monitoring of mitigating measures
- the Con Edison event of June 27, 2007
- February 4, 2008 Review of the Québec-Ontario Inadvertent Synchronization
- July 17 & 21, 2008 Review of the Québec Vegetation Contact Events
- Disturbance Report - July 24, 2008 New England – Maritimes Separation
- Disturbance Report - September 24, 2008 New England – Maritimes Separation
- Disturbance Report-March 11, 2009 NY-Québec Synchronization

NPCC has drafted proposed “Critical Asset Identification Guidelines” to target facilities which will come under the purview of the NERC Cyber Standards, including a proposal for identifying generators subject to the Standards.

2. *State Regional Entity’s assessment of its own effectiveness in Situational Awareness and Infrastructure Security since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.*

NPCC has strongly focused on the need for effective communications, and the exchange of essential operating data, among the Reliability Coordinators of NPCC. NPCC has in place effective procedures, methodologies and supporting documentation to continue a high level of effective and professional communications, and, in doing so, continues to offer an exemplary level of reliable system operations within the northeast.

3. *State any proposals of Regional Entity to improve its effectiveness in Situational Awareness and Infrastructure Security.*

As demonstrated by the events of August 14, 2003 the interconnected power systems require ever more inclusive wide area views to permit better visualization of emerging events in order to contain and mitigate an emergency situation. The NPCC wide area display now resident in each Reliability Coordinator Area control room represents a significant enhancement to the improved awareness of the system operator in NPCC.

#### **E. *Budgeting***

1. *Describe Regional Entity’s activities and accomplishments in the development and submission of its annual business plan and budget, beginning with the 2007 business plan and budget.*

NPCC members of the voluntary predecessor organization funded activities in 2006 that positioned the company for Regional Entity status and consistency in functions and services including business plan and budget (BP&B) development. NPCC’s then Treasurer and Executive Director had several 2006 teleconference meetings with NERC’s then CFO to gain insight with regard to the anticipated requirements of a comprehensive end product BP&B for submission to FERC and Canadian governmental and/or regulatory authorities.

With the goal of consistency, NPCC’s CPA firm mapped NPCC’s 40+ year System of Accounts to the NERC System of Accounts in later 2006 and then NPCC adopted the NERC System of Accounts effective January 1, 2007. Additionally, NPCC financial statements had been provided on a modified cash basis of accounting from the company’s inception in January, 1966 through December 31, 2006. Effective January 1, 2007 NPCC moved to the accrual method of accounting to be consistent with NERC’s accounting methodology so that tracking of receipts and expenditures would support consistency in BP&B development and submission.

To further be in step with NERC, NPCC in late 2006 purchased the MIP Fund Accounting software package by Sage, which is a not-for-profit accounting software

program that NERC's then CFO endorsed, as NERC had been using MIP for some prior years, and NPCC moved from QuickBooks to MIP effective January 1, 2007. Each of these activities supported ultimate accomplishing consistently developed and submitted BP&Bs.

While there have been template changes, process refinements and enhancements, NPCC, through participation with the Regional Entity Budget Group (REBG), via in person meetings and teleconferences, continues to work to enhance what has been a very successful process for development, stakeholder input, Board approval and submissions of the 2007, 2008 and 2009 BP&B's. NPCC feels that the process is a great success and is continually improving.

2. *State Regional Entity's assessment of its own effectiveness in developing its business plans and budgets and in the submission of its business plans and budgets in a consistent manner with NERC and the other Regional Entities.*

NPCC has been extremely engaged with NERC and the other Regional Entities with regard to its BP&Bs being developed in a consistent manner and this has provided for superior effectiveness. Through the REBG, NERC and the Regional Entities continue to share process and procedure practices, guide one another to consistency, and make for a superior product. NPCC has been able to develop draft BP&Bs for extensive stakeholder review and input and has met all of the target deliverables in a timely manner, while incorporating the comments or concerns of the international bulk power system participants in Northeastern North America.

3. *State any proposals of the Regional Entity to improve its effectiveness in submitting effective, adequate and consistent business plans and budgets.*

Through the REBG, NPCC believes that even greater consistency can be achieved. NPCC would propose that standard language with regard to standards development and compliance and enforcement could be applied to all of the NERC and Regional Entity future BP&Bs. Exception or expansion text could be included where specificity is called for. This approach would make review more seamless to the stakeholders and Boards as well as for FERC and Canadian governmental and/or regulatory authority review. Adequacy will remain somewhat of an unknown in recognition of the fact that a system can always be more reliable but that each and every BP&B must consider the realities of finite resources and expertise. One of the many challenges facing the industry as a whole is the aging workforce of technical experts. Retention and recruitment will continue to be at the forefront of providing effective, adequate and consistent BP&Bs that support enhanced international interconnected bulk power system reliability.



**ATTACHMENT 4D**

**RELIABILITY*FIRST* CORPORATION**

**STATEMENT OF ACTIVITIES AND ACHIEVEMENTS**



**ReliabilityFirst Corporation's Statement  
Of  
Activities, Achievements, and Effectiveness in Carrying Out  
Its Delegated Responsibilities**

**Introduction**

ReliabilityFirst Corporation (ReliabilityFirst) is a not-for-profit corporation incorporated in Delaware. ReliabilityFirst's purpose is to ensure and enhance the reliability and adequacy of the bulk electric system in the thirteen states and District of Columbia that comprise its regional footprint via the development of and enforcement of Reliability Standards, forward-looking assessments of the current and projected reliability of the bulk electric system, promoting situational awareness, and other key functions delegated to it by the North American Electric Reliability Corporation (NERC).

In May of 2007, ReliabilityFirst executed an Agreement with NERC for the purpose of delegating to ReliabilityFirst certain responsibilities and authorities as a Regional Entity as defined by Section 215 of the Federal Power Act, Federal Energy Regulatory Commission regulations and directives, and NERC Rules of Procedure.

**I. Reliability Standards Development**

**A. Describe Regional Entity's activities and accomplishments in regional reliability standards development since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007.**

ReliabilityFirst has used its Regional Standards Development Procedure as the process for adoption of a Regional Reliability Standard and the development of consensus for adoption, approval, revision, reaffirmation, and deletion of the following:

1. BAL-002-RFC-2 (Operating Reserves)
  - ReliabilityFirst Board approved - 05/09/07
  - Submitted for NERC review and posting – 1/2/08 through 1/31/08
  - ReliabilityFirst Board reclassified as regional criterion pending additional NERC revision to the associated NERC standard – 10/8/08
2. ReliabilityFirst Reliability Standards Development Procedure
  - ReliabilityFirst Board approved - 12/06/07
  - ReliabilityFirst Board concurrence - 05/22/08

3. BAL-502-RFC-2 Planning Resource Adequacy Analysis, Assessment and Documentation
  - Reliability*First* Board approved - 12/04/08
  - Submitted for NERC review and posting – 1/26/09 through 3/12/09
  - Reconciliation of any comments received via NERC posting and subsequent NERC Board approval estimated by 8/4/09
4. BAL-501-RFC-1 - Automatic Reserve Sharing
  - Retired by Reliability*First* Board - 10/08/08

Reliability*First* is either currently developing or will be developing the following Regional Standards per the NERC Three Year Work Plan:

- PRC-002-RFC-1 Disturbance Monitoring and Reporting Requirements
  - Third ballot, 100% category affirmative vote – 2/18/09 through 3/4/09
  - Approved by Reliability*First* Board 5/14/09 and subsequently submitted to NERC for NERC approval
- PRC-006-RFC-1 Automatic Under Frequency Load Shedding Requirements
  - Fifth comment posting – 1/21/09 through 2/19/09
  - Submitted to NERC for posting 2/26/09 through 4/13/09
- PRC-012-RFC-1 Special Protection System Requirements
  - Initial drafting team conference call occurred in April 2009
- EOP-001-RFC-02 Emergency Operations Plans
  - Initial drafting team conference call occurred in April 2009
- EOP-501-RFC-02 Transmission Emergency Action Plan
  - Initial drafting team conference call occurred in April 2009

Reliability*First* is currently developing the following Regional Standards to fill the reliability gap until Continent wide NERC standards are approved:

- MOD-024-RFC-1 Verification and Data Reporting of Generator Gross and Net Real Power Capability
  - Affirmative ballot – 1/08/09 through 1/22/09
  - Reliability*First* Board remand for further action – 2/26/09
  - Anticipated completion of remand work and Board approval – 10/8/09
- MOD-025-RFC-1 Verification and Data Reporting of Generator Gross and Net Reactive Power Capability
  - Fourth comment posting – 2/5/09 through 3/6/09
  - Submitted for NERC posting – 2/26/09 through 4/13/09

Since January 1, 2007, Reliability*First* Standards Staff has also provided direction and prioritization of Reliability*First* initiated Reliability Standards and the associated standard related procedures. This includes participation in NERC and other regional standard drafting efforts and related working groups, task forces, etc., such as the NERC Regional Reliability Standards Working Group (RRSWG) and the Functional Model Working Group (FMWG).

1. Reliability*First* Standards Staff volunteered to serve as members of NERC Standard Authorization Request (SAR) Drafting Teams. A staff member was the requestor of four NERC SARs that are currently under development by the NERC Standard Drafting Teams.
2. Reliability*First* Standards Program Staff volunteered to serve as members of NERC Standard Drafting Teams (SDT). Currently a staff member is either chair or vice-chair of two NERC SDTs and we are participating on five other SAR/SDT Teams.
3. Reliability*First* Standards Program staff volunteered to participate on special NERC teams to develop plans and programs related to regional tasks associated with standard development. This includes membership in the RRSWG which deals with the NERC “fill-in the blanks” work plan and coordination of regional standards development across NERC. A staff member is a member of the FMWG and the Standards Committee Process Subcommittee (SCPS). A staff member presented at NERC Workshops dealing with Standard Development and LSE registration issues.

Since January 1<sup>st</sup>, 2007, Reliability*First* has improved its Regional Standards voting process to enhance the effectiveness of the standards development process. Appropriate provisions to clarify that any interested stakeholder may participate and vote on Regional Reliability Standards were added to the procedure, including provisions for a ballot body, ballot pool and category ballots. Subsequently, the Reliability*First* commenting and voting application was modified to reflect the improvements to the Regional Standards Development Procedure.

**B. Explain how the Regional Entity has the ability to develop regional standards and has a standards development process that provides for openness, due process and balancing of interests.**

Reliability*First* uses the NERC and FERC approved Reliability*First* Corporation Reliability Standards Development Procedure, which provides for openness, due process and balancing of interests to develop regional standards. The Reliability*First* Corporation Reliability Standards Development Procedure is included in Exhibit C of the approved Regional Delegation Agreement. The following are the common attributes as listed in Exhibit C of the Regional Delegation Agreement that relate to the criteria of openness, due process and balancing of interests (Common Attributes 22, 23 and 25) and the manner in which Reliability*First* meets these Common Attributes:

1. *“Fair due process - The ReliabilityFirst standards development process shall provide for reasonable notice and opportunity for public comment. At a minimum, the procedure shall include public notice of the intent to develop a standard, a public comment period on the proposed standard, due consideration of those public comments, and a ballot of interested stakeholders.”* ReliabilityFirst routinely informs Ballot Body members and interested individuals of all SARs, comment periods, responses to comment periods and Category Ballot results via email notices and postings on the ReliabilityFirst website.
  
2. *“Openness - Participation is open to all Organizations who are directly and materially affected by the ReliabilityFirst region BPS reliability. There shall be no undue financial barriers to participation. Participation shall not be conditioned upon membership in the ReliabilityFirst, and shall not be unreasonably restricted on the basis of technical qualifications or other such requirements. Meetings of SDTs are open to the ReliabilityFirst membership and to others.”* Registration on the ReliabilityFirst Ballot Body is open to all interested individuals as long as they qualify for the self-selection category (ies). All meetings of the SDTs are open and the meeting information is publically posted on the ReliabilityFirst website.
  
3. *“Balanced - The ReliabilityFirst standards development process strives to have an appropriate balance of interests and shall not be dominated by any two interest categories and no single interest category shall be able to defeat a matter.”* The ReliabilityFirst voting process includes a Category Ballot for each proposed standard which is up for ballot. When an interested individual wishes to join a Ballot Pool, they must register in only one of the following categories for each standard that will be voted on. The five categories include:
  - 1) Category 1 – Transmission Owner, Transmission Operator, Transmission Service Provider
  - 2) Category 2 – Generator Owner, Generator Operator
  - 3) Category 3 – Load Serving Entity, Purchasing and Selling Entity, End User
  - 4) Category 4 – Reliability Coordinator, Planning Coordinator, Transmission Planner, Resource Planner, Regional Transmission Organization, Balancing Authority, regulatory or governmental agency
  - 5) Category 5 – Distribution Provider

**C. State Regional Entity’s assessment of its own effectiveness in reliability standards development since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

ReliabilityFirst believes that its standards development has been effective since January 1<sup>st</sup>, 2007. ReliabilityFirst has effectively used the Regional Standards Development Procedure to develop/revise/retire multiple standards. Perhaps most importantly, one standard failed its ballot, indicating the process truly accounts for

stakeholder participation. There has also been a high level of stakeholder participation in the Reliability*First* standards related activities including participation on drafting teams meetings, Standards Committee meetings, industry comment periods and ballot periods. Ballot periods for all approved standards have been accompanied by high quorum levels and high passing percentages.

**D. State any proposals of Regional Entity to improve its effectiveness in reliability standards development**

Reliability*First* is considering increased accountability to develop standards in an expeditious manner which includes:

1. More Standards Committee involvement (direction) and reporting by drafting team chairs.
2. More verbal contact with stakeholders and Reliability*First* groups (i.e. Webinars).

Reliability*First* currently utilizes a web based commenting and voting application hosted by the Midwest Reliability Organization (MRO). Though this application has been effective, Reliability*First* is considering migrating commenting and voting application to the Reliability*First* portal system. By moving the commenting and voting application to the Reliability*First* portal, staff believes having the two functions (Compliance and Standards) under the same organizational platform would be beneficial to industry and would streamline internal operations and maintenance.

Reliability*First* is aware that its standards development program has progressed further than some of the other regions. This is consistent with the 5 year strategic plan that was reviewed by Members and developed and approved by the Board of Directors. The rationale behind the continued progression of the program is to address potential reliability gaps that exist in Reliability Standards until (1) the NERC process can develop new requirements and standards for FERC approval that will replace existing NERC “fill in the blank” standards, some of which require the development of regional standard in accordance with the NERC five year standards work plan and (2) Reliability*First* can consolidate the three sets of legacy requirements that were inherited when it was formed, into a single consistent and clear set. The industry comments received as part of the three year ERO assessment survey will be shared with Reliability*First*'s Board to determine if a shift in strategic direction in standards development is necessary. Reliability*First* does agree that once all necessary NERC standards have been established and put in place, the number of regional standards should be few and many of the then existing regional requirements can be retired or embodied in NERC standards as variances.

Reliability*First* also received a number of comments, particularly from smaller industry entities, regarding the proposed applicability of some draft regional reliability standards compared to NERC's registry criteria. In some cases, proposed standards would appear to apply to entities not currently required to be registered as users, owners, or operators due to the size or connection point of their relevant facilities. During the course of the

Reliability*First* standards development process, industry comments led to modifications to some of these standards, such that their applicability more closely tracked the NERC registry criteria, thus allaying some of the commenter's' concerns. However, the drafting teams continue to consider the technical system needs for reliability and work with industry through the commenting process to gain consensus and the appropriate levels for registration. The apparent disparity between the applicability of reliability standards and the NERC registry criteria will not be unique to Reliability*First*; rather we have only encountered it sooner than some because our program is somewhat more advanced. Each region, and NERC, as well, will face this issue as standard development advances and this issue requires a single and NERC-wide solution. Reliability*First* will continue to make NERC aware of this issue and work with them and the other regions to seek a workable solution.

In addition, to ensure proper outreach and reduce confusion, Reliability*First* is beginning an increase in communications with stakeholders, such as Webinars, and Reliability*First* groups to explain the need for Regional standards (i.e. retirement of Legacy documents and establish clear, consistent and understandable requirements to feed into the NERC process).

## **II. Organization Registration and Compliance Monitoring and Enforcement Program**

### **A. Describe Regional Entity's activities and accomplishments in OC/CMEP since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007.**

- **This description should emphasize quantitative information, e.g.: Staffing; numbers of registered entities registered; numbers of workshops, seminars, training and education sessions, etc. conducted; numbers of compliance audits conducted and reports processed; numbers of other compliance processes conducted and processed, e.g., spot-checks, self-certifications, etc.; numbers of notices of violation issued and processed; numbers of mitigation plans processed.**

### **COMPLIANCE MONITORING AND ENFORCEMENT PROGRAM**

Reliability*First*, in concert with NERC staff, established the scope and type of monitoring methods to be used to monitor each standard for compliance. All requests for information to implement compliance monitoring will be sent to the compliance contact primary (CCP) and the compliance contact secondary (CCS). The CCP and CCS are designated by each Registered Entity as contacts responsible for the coordination and dissemination of data and submittals concerning compliance to the Reliability Standards.

The Reliability*First* compliance monitoring and enforcement program (CMEP) uses eight (8) monitoring processes to collect information to assess and make a determination of compliance:

- Compliance Audits
- Self-Certifications
- Spot Checking
- Compliance Violation Investigations
- Self-Reporting
- Periodic Data Submittals
- Exception Reporting
- Complaints

Compliance audits, self-certifications, periodic data submittals, and spot checks are the primary methods used to monitor for compliance, although the other monitoring methods may be utilized at anytime as needed throughout the year. For a detailed explanation of each of these processes, refer to the “Reliability*First* CMEP” document, which is included as part of Exhibit D to the NERC-Reliability*First* Delegation Agreement.

The Reliability*First* CMEP and all relevant compliance materials can be found on the Reliability*First* website at <http://www.rfirst.org>.

### **Compliance Department Staffing**

The Reliability*First* compliance organization is comprised of three functional groups that interact and work to improve the reliability of the Bulk Electric System (BES). The three functional groups are Audits, Enforcement, and Program Implementation.

At the beginning of 2007, the compliance department was allotted 14 positions. As we progressed in 2007, we realized that the approved staffing would not be adequate to effectively perform all of the responsibilities as outlined in the Delegation Agreement. It became very clear that with the number of entities registered, additional expertise would be necessary including legal support, paralegal, data management, planning engineering, cyber, etc. A manpower assessment was performed and presented to the Reliability*First* Board in support of the 2008 Business Plan. The Board approved an increased compliance staff of 23 FTEs based upon this assessment, which the organization is striving to complete. In order to establish ourselves as capable to make the determinations relative to standard violations and be in a position to negotiate and debate with the experienced experts with the registered entities, our staff experience and qualification level is required to be high. Staffing with qualified personnel will remain as a very high priority. Currently the compliance staff consists of the following individuals:

Vice President and Director of Compliance - 1  
Compliance Managers - 3  
Senior Consultants - 4  
Senior Compliance Engineers - 6



Engineering Assistants – 2  
Paralegal – 1  
Attorneys - 2

**Some highlights from calendar years 2008 and 2007 are provided below:**

**2008**

- Self Certifications
  - The region has processed 4,503 self certifications, which includes the CIP survey results.
  - 1,418 self certifications were CIP related
  - 3,095 self certifications were related to all other reliability standard reporting
- Off-Site Compliance Audits completed - 47
- On site Compliance Audits completed – 12
- Performed 3 Spot Checks, with reviews of over 380 registered entities
- CIP Reporting was done via the new portal system, and all required data was tallied and sent to NERC. One self reported violation was substantiated by survey results.
- Three compliance seminars were held; total attendance was 254 participants.
- A compliance forum was also held and attended by 110 stakeholders. The forum format is a more open dialogue with the participants, versus staff-delivered presentations and allowed the stakeholders to play a more active role to ask questions and get their issues addressed.
- ReliabilityFirst audit staff participated in NERC web based training for auditors, attended the lead auditor training, and also were trained by an outside firm presenting supplemental auditor training techniques used by financial auditing firms. An investigations training session conducted by FERC was also attended by many of the ReliabilityFirst compliance staff.
- Initiated two Compliance Violation Investigations.
- Registered entities were invited to share feedback directly with the ReliabilityFirst Board Compliance Committee. Two registered entities took advantage of the opportunity and provided valuable feedback.

**2007**

- Self Certifications – 2,726
- Self Reports – 363
- Audits Performed – 8 within region and 2 joint with other regions, due to cross-boundary registered entities. Entities were audited against 312 standard requirements. Post-audit surveys were performed to assess entity feedback on process.
- Data Submittals – 219
- Disturbance Control Standards/Control Performance Standards Submittals – 198
- Investigations – 6
- Spot Check – 1 Standard, 17 Entities
- Seminars – 2, with 213 attendees

**Enforcement Activities**

Summary of the number of violations assessed and processed in 2007, 2008, and 2009 to date.

<b>Violation Timeframe</b>	<b>Number of Possible Violations Reviewed</b>	<b>Number of Violations With Sufficient Basis</b>	<b>Notices of Alleged Violation Filed (#Violations)</b>	<b>Notices of Confirmed Violation Filed. (#Violations)</b>	<b>Number of Violations Complete</b>
2007 Pre-June 18	293	183	N/A	N/A	175 (8 Violations moved to Post-June 18 Status)
2007 Post-June 18	48	42*	16	14	1
2008	184	71*	2	0	0
2009 YTD	23	13*	0	0	0

\*Note: Fifty-Eight (58) violations are presently in settlement discussions. 2009 YTD values are as of May 31, 2009.

Summary of the number of mitigation plans processed to date.

<b>Mitigation Plan Timeframe</b>	<b>Number of Violations with Mitigation Plans Submitted</b>	<b>Number of Violations with Accepted and Approved Mitigation Plans</b>	<b>Number of Violations with Mitigation Plans Certified as Complete</b>	<b>Number of Violations with Mitigation Plans Verified as Complete</b>
2007 Pre-June 18	183	183	175 (Remaining 8 Moved to Post-June 18 Status)	18
Post-June 18, 2007 TD	97	91	75	33

The most significant change since 2007 was the enforcement of mandatory Reliability Standards as of June 18, 2007. This is when FERC approved standards became enforceable by law along with the ERO and all of the Regional Entities taking on a new role for enforcement of compliance. As such, ReliabilityFirst took the NERC CMEP and implemented it across the entire ReliabilityFirst group of registered entities.

ReliabilityFirst established a single definition for the “Bulk Electric System (BES)” for application across the entire footprint. This is a major step forward, as there were three separate definitions for the various parts of the footprint previously. This definition included stakeholder input and required a transition period for the registered entities within ReliabilityFirst. This transition period ended in December of 2008 and all registered entities are now subject to compliance and enforcement based upon the BES definition. The single definition will result in more uniform application of reliability standards throughout the footprint.

ReliabilityFirst started accepting the reporting of self-certifications by an electronic reporting system and has since moved to a portal system that is being used by 6 of the eight regions and NERC. Implementation of the portal data management system allowed each entity to self-certify via the data management system rather than e-mails or faxes to help facilitate accounting for over 360 registered entities.

ReliabilityFirst Compliance Staff assigned a compliance staff member as the point of contact for all reliability standards. That listing with contact information was posted on our website and was developed to assist registered entities when standards or compliance questions arise.

ReliabilityFirst also assigned a compliance staff primary and secondary person to each registered entity as a contact to address any of their concerns. This listing is posted on our website.

## **ORGANIZATION REGISTRATION**

As specified under ReliabilityFirst's Delegation Agreement with NERC, ReliabilityFirst will continue to register organizations responsible for complying with Reliability Standards in accordance with Section 500 of the NERC Rules of Procedure. ReliabilityFirst will identify the owners, operators, and users of the bulk power system that meet the definition of Registered Entities within ReliabilityFirst's area of responsibility.

Forms to register organizations and revise existing organization registrations are available on the ReliabilityFirst website.

ReliabilityFirst has developed and maintained a ReliabilityFirst Compliance Registry with updates as changes occur to the registry and routinely provides this information to NERC.

A registered entity may choose to appeal its registration by first notifying ReliabilityFirst staff in writing or by transmittal of an electronic document that it disputes the registration. The notification should include a description of facts that supports the entity's position. The ReliabilityFirst Staff will review the dispute, including the Entity's supporting documentation. ReliabilityFirst Compliance Staff will assess the appeal using technical knowledge, experience, and judgment based on the information provided by the entity.

The ReliabilityFirst compliance staff will make an initial determination of each registration dispute. If the initial determination of the ReliabilityFirst Compliance Staff is in agreement with the entity, the entity will be notified in writing or by transmittal of an electronic document and the process is complete. ReliabilityFirst will notify NERC of any registration changes.

If the ReliabilityFirst Compliance Staff does not accept the position of the entity, the entity will be notified in writing or by transmittal of an electronic document of the initial determination and the supporting basis for the decision. If the entity chooses to advance the appeal, they must submit a registration appeal to NERC.

Additional Organization Registration and Certification data:

- Performed two Organization Certifications of registered entities, with guidance and participation from NERC. One of these efforts was for a multi-regional entity and ReliabilityFirst staff led the certification
- Entities Registered 357
- Functions Registered 674

**B. Describe how the Regional Entity has the ability to enforce reliability standards and to provide for an adequate level of bulk power system reliability in its Region.**

All compliance and enforcement activities conducted by ReliabilityFirst are governed by and are consistent with our NERC and FERC approved CMEP.

ReliabilityFirst uses multiple and varied means to reach out to Registered Entities regarding the exchange of information related to compliance, preparing mitigation plans, submitting data, and updating the status of compliance activities. Examples of some of these various communication methods include a monthly web-based newsletter and a communication directly emailed to the compliance contacts outlining upcoming events or filings due within the next month. Additionally, each Registered Entity is assigned a ReliabilityFirst compliance staff member as a primary contact to develop individual knowledge of the registered entity as well as build a relationship with those directly responsible for implementing their compliance programs. Establishing and enhancing the communication between ReliabilityFirst and the registered entities provides the framework for setting the clear expectation of compliance and cooperation and the free flow of information and evidence that is vital in assessing compliance.

When possible violations are uncovered, an initial quick assessment is made as to the potential risk to reliability that may exist and whether any immediate action must be taken to mitigate that risk. This initial assessment is usually in the form of a phone call followed up by a simple initial information request. Once an initial assessment is done, a formal, much more detailed information request is conducted. This detailed information allows ReliabilityFirst to judge the adequacy and completeness of any proposed mitigation plan. ReliabilityFirst places an emphasis on root cause determination during violation identification and determination and on the corresponding corrective action described in the associated mitigation plans.

When the depth, breadth, and scope of the violation is determined, the Notice of Alleged Violation and Proposed Penalty is prepared and the registered entity is contacted and instructed as to the contents of the notice and informed on the process and the options available for resolution.

Setting the expectation of compliance, providing fair and consistent treatment in enforcement actions, and diligently requiring proof of mitigation plan completion and return to a state of compliance, all enable ReliabilityFirst to fulfill the duty of ensuring reliability of the BES within the ReliabilityFirst region. The self-assessment activity, as evidenced by the number of self-reports, indicates that registered entities are diligently pursuing reliability; and their subsequent cooperation after any deficiency is testimony to the strong desire to be compliant to all standards.

**C. Describe how the Regional Entity has fair and impartial procedures for enforcing reliability standards**

ReliabilityFirst adheres to and performs in an unbiased and rational manner when enforcing the FERC approved reliability standards. ReliabilityFirst employs its Compliance Monitoring and Enforcement Program (Exhibit D to its approved Delegation Agreement), which provides fair and impartial procedures for the enforcement of Reliability Standards. Additionally, all employees and contractors sign Non-Disclosure and Confidentiality Agreements and Conflict of Interest forms and are as well governed under the ReliabilityFirst Delegation Agreement with NERC and the NERC Rules of Procedure Section 1500. The work history for each audit team member is reviewed and each auditor is given an opportunity to remove themselves on the basis of a possible conflict of interest or the existence of other circumstances that could interfere with an unbiased or impartial performance of duties during the enforcement of the standards.

To ensure independence and eliminate any conflicts of interest, ReliabilityFirst does not allow stakeholder participation in any aspect of its compliance and enforcement responsibilities, including compliance audits. Furthermore, the Board Compliance Committee is chaired by and is comprised of a majority of Independent Directors from our hybrid board.

**D. State Regional Entity's assessment of its own effectiveness in OC/CMEP since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed**

The effectiveness of the ReliabilityFirst CMEP and OC implementation has improved since January 2007. The improvement has occurred due to many factors, including the hiring of competent and experienced staff, the development and enhancement of internal and NERC associated processes, the evolution of change with these processes, the lessons learned from actually implementing the program, the sharing of experiences at various workshops, and the advancement of knowledge of the Registered Entities regarding the compliance process.

However, the implementation of the enforcement steps of the CMEP has been impacted by the sheer volume of violations identified since January 2007. During the first two years of implementing the CMEP, many enforcement process activities have evolved through much iteration, resulting in a backlog of violations and associated mitigation plan processing. Through the lessons learned associated with the processing of these violations and the hiring of specialized staff, our handling of these violations on a case management approach has enabled us to be more efficient and effective. A backlog reduction plan has been established that should enable us to significantly reduce and hopefully eliminate the backlog by mid 2009, while enabling us to effectively manage these cases going forward. Although this documentation processing backlog developed within the region, it is also an indication that the entities are addressing the standard requirements and making the necessary improvements to assure reliability.

The Organization Certification activities were limited to two entities and were performed successfully. However, the Organization Registration process has been very effective. With over 360 Registered Entities, the overall process has progressed very well. Relative to the number of entities registered, we have experienced a very low number of challenges to the registrations, indicating that the process was fair and accurate. One group of entities challenged their registration as a group, which has been successfully resolved, while only four other entities have challenged their registrations.

ReliabilityFirst, along with five other regions and NERC, has implemented a web based compliance reporting and tracking tool. This tool will make the reporting for the entities and management of data for the region to be much more efficient and accurate when dealing with such a large amount of data reporting. The interconnection of this tool with NERC will also make the transfer of data much more effective and efficient.

ReliabilityFirst is also in the process of implementing a new document management system. It is expected that adding a document management system for tracking compliance issues, monitoring mitigation plan status, and transition activities and as well sending out alerts and reminders to all of our membership on data submittals, etc. will become a more effective and efficient communications tool and will be more customer focused.

ReliabilityFirst continues to reach out to its Registered Entities to further enhance the communication between the region and our Registered Entities. Below are several methods that ReliabilityFirst is using to accomplish this:

1. A monthly newsletter - The ReliabilityFirst newsletter provides entities with news and information relating to ReliabilityFirst's reliability activities.
2. A monthly compliance update letter - The ReliabilityFirst monthly update letter provides Registered Entities with changes and notification of submittal due dates of materials necessary to satisfy compliance requirements.
3. The ReliabilityFirst website - The ReliabilityFirst website provides compliance and technical materials needed to support compliance program implementation.
4. Compliance Workshops/Seminars/Webinars - ReliabilityFirst compliance workshops/seminars or webinars, which will include NERC and FERC related initiatives, are scheduled to assist the Registered Entities in the understanding of their responsibilities to satisfy compliance to all Reliability Standards throughout the year.
5. The compliance portal system and its notification home page allow our Registered Entities to report compliance via an internet based application. The home page provides updates and news worthy items as well as a color coded alert system that

provides the Registered Entities information on when certain standard requirements need responses.

6. Periodic Reports - ReliabilityFirst compliance provides periodic reports to its Registered Entities of its compliance activities and areas of compliance that the Registered Entities continue to struggle with. These reports are posted on the ReliabilityFirst website.
7. Open Compliance Calls - ReliabilityFirst Compliance is developing the capability to facilitate periodic conference calls that are an open forum for our Registered Entities to call into and voice concerns, ask questions, and to be informed about upcoming compliance items.

#### **E. State any proposals of Regional Entity to improve its effectiveness in OC/CMEP.**

An effective, efficient and consistent compliance program absolutely requires that data and documents are managed in an accurate and timely manner and made readily available to the ReliabilityFirst compliance staff, NERC and FERC in the execution of their respective duties. The amount, type, breadth, and scope of the data and documents being generated in the mandatory reliability standard world are outpacing the capabilities of the current information management system. It is essential that a data and document management system be put in place that provides these capabilities and provides for the error free sharing of crucial information between the Regions, NERC and FERC. As the compliance program has matured and developed, ReliabilityFirst has reduced the most critical processes to written process sheets and is developing a document and docket management system to ensure proper process and procedure is followed with efficiency. This new system will be operational in June 2009.

The realignment of the compliance staff into functional groups continues to be developed. For example, the Enforcement group has initiated a case manager/technical resource team approach for every violation. Once a possible violation is identified, a case manager (typically an on-staff lawyer) and a technical resource (typically an on-staff engineer) are assigned. This team is responsible for all aspects, both procedural and technical, for successful resolution of the violation.

### **III. Other Program Areas**

#### **A. Reliability Readiness Evaluation and Improvement Program**

- 1. Describe Regional Entity's activities and accomplishments in Reliability Readiness Evaluation and Improvement since January 1, 2007, including discussion of improvements in this area.**

ReliabilityFirst continued to participate in the NERC Readiness Evaluation program during calendar years 2007 and 2008. ReliabilityFirst participated in ten internal



regional Readiness Evaluations in 2007 and three during calendar year 2008. ReliabilityFirst has continued to be the lead region in providing personnel support for these evaluations. Part way through calendar year 2008, the NERC Operating Committee, along with the entire NERC community, determined to eliminate the Readiness Evaluations Program due to its relationship with the compliance audit program and the overlap that existed.

Although the Readiness Program is being closed out, ReliabilityFirst has elected to continue to track open Readiness Evaluation recommendations to closure. ReliabilityFirst is currently tracking 28 recommendations distributed across 11 companies.

- 2. State Regional Entity's assessment of its own effectiveness in Reliability Readiness Evaluation and Improvement since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

ReliabilityFirst Corporation continued to be effective in support of this NERC driven program, consistently providing more readiness evaluators than any other region, up until the termination of the program by NERC.

- 3. [Discussion of proposed improvements not needed, since this program is being phased on in the first quarter of 2009.]**

## **B. Training, Education and Operator Certification**

- 1. Describe Regional Entity's activities and accomplishments in Training, Education and Operator Certification since January 1, 2007, including discussion of improvements in this area.**

Due to the need for certified operators to attain NERC continuing Education Hours (CEH), ReliabilityFirst does not conduct Operator Certification training. ReliabilityFirst does conduct workshops and seminars throughout the year to provide updates on NERC and ReliabilityFirst programs in the areas of Standards development, Compliance Monitoring and Enforcement, and Critical Infrastructure Protection.

ReliabilityFirst does conduct other training activities for the regional staff under this program area. These activities include training for overall staff improvement and development. Individual, personal development training falls within the responsibility of the respective department manager for his or her staff.

- 2. State Regional Entity's assessment of its own effectiveness in Training, Education and Operator Certification since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

The Reliability*First* Training, Education, and Operator Certification program area provides training to staff and supports workshops and seminars. Feedback from these workshops and seminars has been positive, with requests for additional events. As the new responsibilities of Reliability*First* as a Regional Entity become clearer, Reliability*First* has expanded its training offerings to include Webinars and will investigate other training opportunities in the future.

**3. State any proposals of Regional Entity to improve its effectiveness in Training, Education and Operator Certification.**

The Reliability*First* staff will be conducting training in 2009 for the Reliability*First* Power Flow Model Contact Group for the new Eastern Interconnection Reliability Assessment Group (ERAG) database application. This database was developed under the auspices of ERAG and will be used to produce the power flow base case models under the Multi-regional Modeling Working Group (MMWG) for the Eastern Interconnection transmission system. The MMWG currently uses a database to produce the dynamic models of the Eastern Interconnection transmission system.

**C. Reliability Assessment and Performance Analysis Program**

**1. Describe Regional Entity's activities and accomplishments in Reliability Assessment and Performance Analysis since January 1, 2007, including discussion of improvements in this area.**

In support of the ERO, Reliability*First* has analyzed (including performing its own transmission assessment studies), assessed, and reported on the reliability and adequacy of the bulk electric system within its footprint for past, present, and future conditions. This includes conducting seasonal, near-term and long-term separate resource and transmission assessments, analysis of system disturbances, and collection and dissemination of data and information.

Reliability*First* stakeholder representatives take active roles in the NERC, ERAG, and Reliability*First* assessment processes. Reliability*First* staff and stakeholder representatives actively participate in the NERC Reliability Assessment Subcommittee proceedings (including developing enhancements to the NERC assessments), in the three ERAG forum study committees and working groups, and in the regional assessment work, as well.

Along with staff, the Reliability*First* Reliability Committee has overall responsibility for the assessments; with the Resource Assessment Subcommittee conducting the resource assessment and producing the reports, and the Transmission Performance Subcommittee conducting the transmission assessment studies and producing the reports. The actual analysis effort is conducted by independent Reliability*First* staff.

**2. State Regional Entity’s assessment of its own effectiveness in Reliability Assessment and Performance Analysis since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

Since January 1, 2007, assessment effectiveness has improved with the refinement of both resource and transmission assessment procedures. Assessment reports have been refined to better describe results, and a public version of the transmission assessment reports was developed in 2008.

Resource assessment procedures were revised to collect data from the two large RTOs that operate markets within *ReliabilityFirst*. Also as part of the assessment process, *ReliabilityFirst* reviews the resource adequacy of each RTO as a whole, as well as combined for the entire footprint. The resource assessment reports were also revised to be patterned after the enhanced NERC assessment requirements.

The transmission assessment study methods are (and have been) continually reviewed and revised as needed to better perform the assessment work. Transmission studies have included transfer capability analyses and voltage screening for study clusters within *ReliabilityFirst*.

**3. State any proposals of Regional Entity to improve its effectiveness in Reliability Assessment and Performance Analysis.**

The *ReliabilityFirst* Board of Directors and stakeholders are continuing discussions to review and improve the method in which transmission assessment studies are conducted. *ReliabilityFirst* wants to leverage the work conducted by the two large Regional Transmission Organizations (RTO) that operate within its boundary, as well as provide a thorough, independent, assessment of the bulk electric system. This has been a challenge to find the right balance.

*ReliabilityFirst* staff has developed a detailed event analysis procedure and continues to refine it as more experience is gained from performing disturbance event analyses.

**D. Situational Awareness and Infrastructure Security Program**

**1. Describe Regional Entity’s activities and accomplishments in Situational Awareness and Infrastructure Security since January 1, 2007, including discussion of improvements in this area.**

*ReliabilityFirst* has worked with the Registered Entities in its geographic area to help them understand the intent of the NERC Cyber Security Standards (CIP-002-1 – CIP-009-1), including visits to Registered Entities upon request. *ReliabilityFirst* has

committed to comply with the CIP standards in its own Information Technology area, even though we do not in any way impact reliable operation of the Bulk Power System.

ReliabilityFirst has sponsored a regional Critical Infrastructure Protection (CIP) group since the region was formed. The CIP group is populated by volunteers from the members of ReliabilityFirst, with a structure very similar to that of the NERC CIPC. The CIP group was recently elevated from a Subcommittee to a full Committee reporting directly to the Board of Directors. This action was taken by the Board of Directors in recognition of the importance of Infrastructure Protection to the industry. Members of the ReliabilityFirst CIPC, including the ReliabilityFirst staff representative and the ReliabilityFirst Chief Security Officer (CSO), participate in the activities of the NERC CIPC, including active participation on NERC CIPC working groups. The ReliabilityFirst CSO chairs the NERC CIPC Electricity Sector Information Sharing and Analysis Center Working Group (ES-ISAC WG) that is working closely with NERC staff to recommend improved communications capabilities for the ES-ISAC to use in communicating alerts and other critical information to the industry.

ReliabilityFirst has been working with NERC staff and the staffs of PJM and Midwest ISO to identify tools and communication mechanisms to permit the regional staff to have access to Situation Awareness information. The staff has identified a team of staff members who are responsible for monitoring Situation Awareness and for recognizing the need to initiate Event Analysis and Compliance Investigations when appropriate. All Situation Awareness staff members have secure NERC logons with access to NERC tools such as the Reliability Coordinator Information System (RCIS) and System Data Exchange (SDX). ReliabilityFirst has also established an email address for Registered Entities to forward notification of events reportable to NERC standards and the DOE OE-417 report and has a 24-hour telephone number for telephonic reporting of incidents.

**2. State Regional Entity's assessment of its own effectiveness in Situational Awareness and Infrastructure Security since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

The ReliabilityFirst staff continues to develop protocols and procedures for dealing with incidents that occur. We have participated in conference calls involving staff from NERC and other affected regions, as well as staff from the Federal Energy Regulatory Commission (FERC), the Department of Homeland Security (DHS), and other government agencies during events such as the hurricanes that swept through much of the region in 2008. The ReliabilityFirst CSO participates in the bi-weekly conference calls with staff from NERC, FERC, and the other regions to assess recent incidents and to gather and share additional information about these incidents as appropriate. Recognizing that expectations in this area have shifted and communication mechanisms between and among the Regions, NERC and FERC still require some improvement not under ReliabilityFirst's unilateral control, the organization believes that it has been effective in the environment that existed.

**3. State any proposals of Regional Entity to improve its effectiveness in Situational Awareness and Infrastructure Security.**

The ReliabilityFirst CSO is a member of a group that includes situation awareness staff from NERC and FERC and volunteers from the NERC Reliability Coordinator Working Group (RCWG.) This group is collaborating to develop a Situation Awareness tool that provides information from all Reliability Coordinators (RCs), with the ultimate goal of a common set of information being provided by all RCs. Once this tool is defined and implemented, ReliabilityFirst will add it to its “toolset” for Situation Awareness. The ReliabilityFirst Situation Awareness staff continues to refine its protocols and procedures, in coordination with PJM and MISO.

**E. Budgeting**

**1. Describe Regional Entity’s activities and accomplishments in the development and submission of its annual business plan and budget, beginning with the 2007 business plan and budget.**

Overall, ReliabilityFirst under spent its 2007 budget by \$2,690,349. 2007 was a year of significant change and uncertainty for all regional entities, playing a major role in ReliabilityFirst under spending. Our 2007 budget was primarily comprised of two components: (1) operating costs and (2) one-time costs associated with relocating the corporate office.

The 2007 budget was created assuming ReliabilityFirst would be fully staffed for mandatory enforcement of Reliability Standards by 01/01/07. Mandatory enforcement was delayed until June 18<sup>th</sup> and it was decided to delay filling these positions accordingly. Subsequently, there were difficulties in hiring qualified staff and the vacancy rate was higher than planned.

Lower than budgeted staffing levels caused commensurate lower expenditures for travel and meetings. For budget purposes it was assumed that all telecommuting employees would travel to the main office every two weeks. Actually, our telecommuters traveled only 6 to 12 times a year, thus significantly reducing travel costs. A third contributor was implementing an office Voice over Internet Protocol (VOIP) and virtual meeting capabilities. This gives our employees the ability to collaborate without the need for travel to meet in person.

ReliabilityFirst achieved its projected budget goal of operating within 5% of budget in 2008.

ReliabilityFirst entered into a contract for the development and delivery of a Data/Document Management & System Interface (DMSI) application in early 2008. The DMSI project was not included in the 2008 budget due to the timing of the budget cycle,

but \$1.5M was later approved by the Board. It is greatly needed to increase the efficiency and effectiveness of the registered entity-region compliance interface, document tracking, electronic storage and court docket tracking for compliance purposes and also to improve the efficiency of all other delegated functions.

**2. State Regional Entity's assessment of its own effectiveness in developing its business plans and budgets and in the submission of its business plans and budgets in a consistent manner with NERC and the other Regional Entities.**

ReliabilityFirst develops its business plans and budgets in a consistent manner with NERC. Two items impede the effectiveness in developing a business plan and budget. The first is lack of historical information multiplied by the fluid environment. This will diminish as each regional entity gains better insight from past experiences. The second is due to the regulatory requirements of starting the budget process so early in the year. A business plan and budget is difficult to determine 9 months before it starts. This impacts all regional entities and NERC, too.

**3. State any proposals of the Regional Entity to improve its effectiveness in submitting effective, adequate and consistent business plans and budgets.**

Improvements ReliabilityFirst has put into place to date:

- a. Budgeted new personnel using staggered start dates. Prior assumptions were that all new personnel were to start at the beginning of the year.
- b. Implemented a new accounting package that tracks expenses in finer detail than just the chart of accounts. This package will collect expenses by events such as audits and will eliminate the use of spreadsheets for creating department reports since reports are produced directly from the new software package.
- c. To improve ReliabilityFirst's effectiveness in tracking and forecasting employee travel costs, average costs for various types of travel are now calculated and used by department heads for a bottom up approach in determining travel.
- d. A new time entry system will be implemented in the second half of 2009. This system will give ReliabilityFirst the ability to enter hours worked by the same level of detail for expenses. Matching expenses and time worked by event will provide a more complete picture of costs.
- e. An improvement for which all regions, including ReliabilityFirst, have offered support is changing the timing of the budgeting process. Regulatory requirements dictate the current budget milestones and we recognize the difficulty caused by seeking modification. However, the

process could be modified to allow business plan and budget changes within October. These changes could be approved by all governing bodies through an accelerated approval process. This would give each regional entity an opportunity to true up their business plan and budget to reflect any known changes.

**ATTACHMENT 4E**

**SERC RELIABILITY CORPORATION**

**STATEMENT OF ACTIVITIES AND ACHIEVEMENTS**





SERC Reliability Corporation  
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**SERC Reliability Corporation**  
**Statement of Activities, Achievements, and Effectiveness**  
**in Implementing Delegated Responsibilities through May 31, 2009**  
**June 24, 2009**

**I. Introduction**

**Overview of SERC Reliability Corporation**

The SERC Reliability Corporation (SERC) is a nonprofit corporation responsible for promoting and improving the reliability of the bulk power systems in all or portions of 16 central and southeastern states. Electric systems in the region serve approximately 23% of the net energy for load (NEL) in North America and 31% of the NEL in the Eastern Interconnection.

SERC executed an agreement with the North American Electric Reliability Corporation (NERC) on May 2, 2007, for the purpose of delegating to SERC certain responsibilities and authorities of a regional entity as defined by Section 215 of the Federal Power Act; Federal Energy Regulatory Commission (FERC) regulations and directives, and NERC rules of procedure.

SERC, initially called the Southeastern Electric Reliability Council, was formed in 1970 as a voluntary association of members comprised of electric industry reliability stakeholders in the southeast. SERC was incorporated as a 501(c)(6) nonprofit corporation in the state of Alabama on April 29, 2005 to position SERC to become a regional entity with an appropriate stakeholder governance structure.

**Membership and Governance**

SERC monitors approximately 225 entities in the region for compliance with mandatory reliability standards. Membership in SERC affords participants the opportunity to participate in the technical activities and governance of the organization. Membership, which is voluntary and is without dues, is open to bulk power system owners, operators, and users in the region and there is provision for end-use customer representation. The number of entities that are members of SERC is approximately 60.

SERC is governed by a Board of Directors, comprised of a representative from each member of the corporation. The Board of Directors delegates responsibility for operational oversight of the corporation to an Executive Committee of 12 directors. In December 2006, the board formed a Board Compliance Committee to oversee SERC's program for monitoring and enforcing compliance with FERC-approved Reliability Standards in the region. In October 2007, the Board also formed a Human Resources and Compensation Committee to advise the President, board officers, and the board on matters related to compensation and human resources.

The Board appoints one director to serve as a non-employee Treasurer of the corporation. The Treasurer is vested by the Board with the responsibility, working with the President, to provide oversight of the finances of the corporation.



Figure 1 provides a high-level view of the SERC board and committee structure.

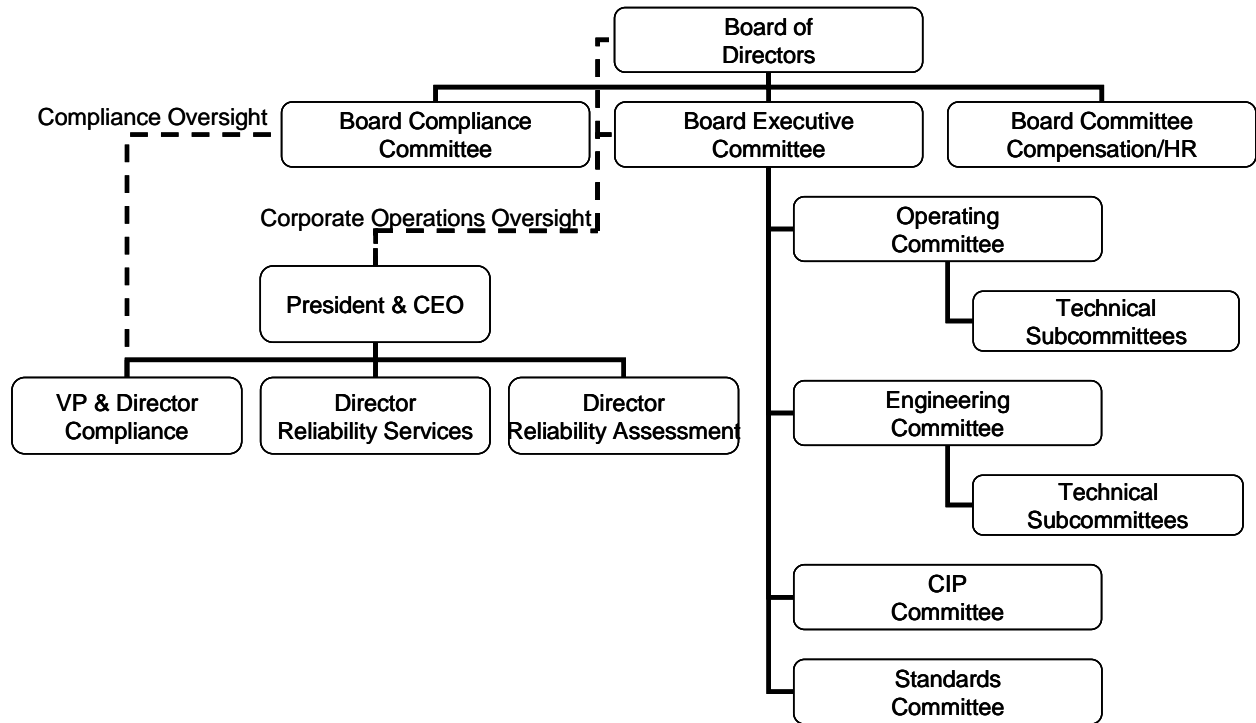


Figure 1 – SERC Stakeholder Organization and Relation to Staff

### Statutory Functional Scope

SERC provides the following statutory functions in support of the electric reliability organization:

- Active participation in the development of North American Reliability Standards for the bulk power system, and as needed, development of reliability standards applicable within the SERC Region.
- Monitoring and enforcement of approved Reliability Standards, including the registration of responsible entities, and as needed, certification of such entities.
- Assessment of the present and future reliability and adequacy of the bulk power system.
- Monitoring reliability performance and promoting reliability improvement.
- Promoting effective training and education of reliability personnel, and assisting in the certification of operating personnel.
- Promoting the protection of critical infrastructure.
- Facilitating situation awareness.

SERC does not provide any non-statutory functions at this time. SERC operates as an independent corporation and is not affiliated with any registered owner, operator, or user of the bulk power system except as defined by the governance of the stakeholder board of directors.



## **Staffing and Resources**

As shown in Figure 2 on the next page, SERC has a targeted staffing level in 2009 of 44.5 power industry professionals and support personnel. Actual staff as of June 1, 2009 was 43.5 FTEs. SERC accelerated its hiring of staff ahead of schedule during 2008 to enable SERC to maintain high productivity and quality levels despite the greater than expected workload in the startup of regional entity activities, particularly in the compliance program.

In recognition of the importance of the compliance role of regional entities, SERC has dedicated half of its staff resources to compliance monitoring and enforcement. The compliance staff encompasses two groups, one conducting compliance audits and the second performing compliance investigations and enforcement.

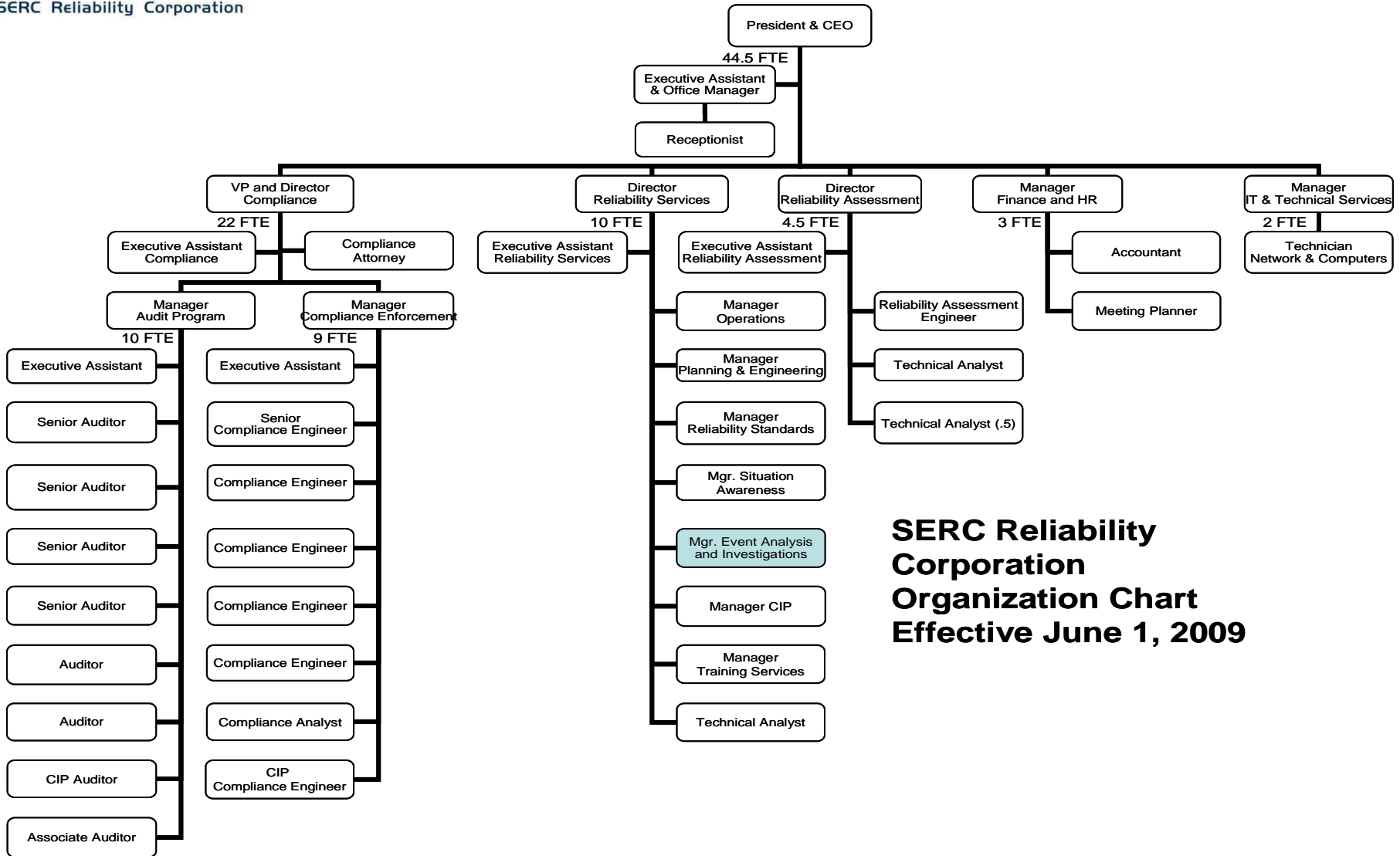
SERC has organized the remaining technical staff into a reliability services group and a reliability assessment group. These experts in operations, engineering, and analysis assist registered entities in assessing and improving reliability. It is in support of these areas that SERC engages the majority of its vast pool of industry experts on its technical committees.

All SERC staff members are payroll employees. SERC does employ contractors and consultants from time to time, but only in support of specific projects or finite work scopes.

## **General Statement of Progress Since January 2007**

Since January 2007, SERC has achieved the following general developments and improvements in the execution of its responsibilities as a regional entity:

1. Modified the SERC bylaws to comply with FERC directives in its order approving the SERC regional entity delegation agreement.
2. Increased staff from 13 FTEs to 43.5 FTEs through an active recruitment program designed to bring in talented and experienced staff from diverse backgrounds.
3. Reorganized the staff along functional lines to assign clear accountability for SERC's delegated functions.
4. Established a new central office in Charlotte, North Carolina and relocated the corporate headquarters from Birmingham, Alabama.
5. Reviewed and updated all regional procedures to comply with FERC regulations and ERO rules of procedure.
6. Completed an internal self-assessment of SERC's compliance with NERC Reliability Standards and the NERC-SERC delegation agreement; and established a document control procedure to maintain continuous evidence of compliance.
7. Established objective corporate performance metrics based on the FERC-approved annual business plan; an external auditor verifies the results compared to the metrics prior to presentation to the Board.
8. Completed a market-based compensation and benefits study to enable SERC to remain competitive in hiring and retaining retain talented staff.



**SERC Reliability Corporation  
Organization Chart  
Effective June 1, 2009**

Figure 2 – SERC Reliability Corporation Staffing Chart Effective June 1, 2009<sup>1</sup>

<sup>1</sup> Unfilled position is highlighted.



9. Entered into an agreement with other regional entities to form the Regional Entity Management Group for the purpose of promoting consistency and efficiency in the implementation of delegated functions across all regions.
10. Implemented an aggressive program for staff development, consisting of an average of two seminars per month, with a goal of 80% of SERC employees receiving at least 20 training hours per year.
11. Reduced the number of face-to-face meetings per year by 40% and increased the number of WebEx and conference calls fivefold to improve participation levels and reduce costs.
12. Established a culture of continuous improvement by soliciting written feedback from board members, registered entities, and other stakeholders regarding SERC's performance in various activities and implementing plans for improvement.

Additional progress specific to each functional area is described in the remaining sections of the report.

### **Review of Stakeholder Inputs**

Stakeholder ratings and comments from the ERO three-year assessment survey support the notion that SERC has developed a fundamentally sound regional entity governance and staff. On the subject of governance and independence, the following inputs were received<sup>2</sup>:

- SERC scored 1.52 (21 respondents) indicating strong agreement that SERC is sufficiently independent of owners, operators, and users to effectively perform statutory duties with objectivity and integrity (Survey Question 63).
- SERC scored 1.61 (18 respondents) supporting the notion that SERC has sufficient rules to ensure its independence from bulk power system owners, operators, and users (Survey Question 65).
- Stakeholders (22 respondents) also agree SERC is qualified, competent, well-prepared, and organized in the conduct of its statutory functions (score 1.64 on Question 59) and is timely and responsive to stakeholders on reliability matters (score 1.71 on Question 60).
- Responses to Questions 64 (1.67 with 18 respondents), 62 (1.74 with 19 respondents), and 51 (1.65 with 20 respondents) indicate stakeholder agreement that SERC is open, transparent, and fair in the conduct of statutory functions and communicates effectively with stakeholders on reliability matters.

The survey results did not indicate any stakeholder concerns with regard to the governance, organization, functional scope, staffing, or general conduct of operations by SERC.

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<sup>2</sup> Scores are based on a scale of 1 to 5, with 1 being fully agree, 3 being neutral, and 5 being fully disagree.



## II. Reliability Standards Development

### A. Describe Regional Entity's activities and accomplishments in regional reliability standards development since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007.

SERC is a strong proponent of a stakeholder-driven, ANSI-accredited standards development process at NERC and of a consistent set of North American-wide Reliability Standards for the bulk power system. The members of SERC actively participate in the development of NERC Reliability Standards. Typically at any point in time there are 75 or more SERC member volunteer experts represented on over 25 NERC SAR and standard drafting teams – there has been a SERC representative on every team to date. SERC members are also active on the NERC Standards Committee and related groups.

The reliability standards program actively informs SERC members and registered entities of NERC standards activities and opportunities to participate. SERC strives to ensure that every notice of a standard development activity at NERC and other regions is forwarded to interested stakeholders within the SERC region. Procedures, forms, meeting agendas and minutes, draft postings, etc., for all regional standards development activities are posted in a timely fashion on the SERC website. Notices on upcoming meetings or postings are sent regularly to SERC email lists and posted publicly. The Standards Committee and drafting team meetings offer WebEx for those team members who are unable to attend in person.

Consistent with SERC's vision of uniform North American Reliability Standards, the region does not currently envision development of region-specific standards, except those required by NERC's Reliability Standards' Three-Year Work Plan. In response to NERC's plan, SERC has the following activities underway to develop regional standards:

- Underfrequency Load Shedding (PRC-006) – Development began with the submittal of a SAR in February 2008. The second draft of the reliability standard has been posted for public comment, with balloting expected in 2009 after NERC finalizes its continental performance criteria.
- Special Protection Systems (PRC-012, 013, 014, 015 & 016) – Development is planned in accordance with the NERC work plan.
- Disturbance Monitoring Equipment (PRC-002) – Development is on hold pending development of a revised North American Reliability Standard.
- Disturbance Control Performance (BAL-002) – Development is on hold pending completion of a revised North American Reliability Standard and a re-evaluation by NERC whether a regional standard is necessary.

In addition to standards, SERC has historically maintained a set of approximately 25 "SERC Supplements" to promote good utility practice and consistency in achieving compliance with Reliability Standards. SERC is in the process of reviewing and updating these documents to distinguish regional criteria contained within these documents from other technical reference materials such as guides, procedures, and white papers. This review ensures all of the technical documents are current with approved Reliability Standards. SERC maintains a catalog of regional criteria and periodically files updates with NERC.



SERC facilitates the activities of the SERC Standards Committee, which was formed in February 2008 to provide oversight of the standards development process within the region. The Standards Committee originally was comprised of the officers of SERC's technical standing committees. However, membership was expanded in December 2008 to include at-large members to ensure all stakeholder sectors are represented on the committee.

Since January 2007, SERC has taken the following steps to improve reliability standards development within the region:

- In April 2007, SERC assigned a full time Manager of Reliability Standards, whose sole responsibility is to support the development of regional reliability standards and the interaction of SERC stakeholders in the NERC standards development process.
- Formed a SERC Standards Committee and regional standards development process.
- Formed a SERC Registered Ballot Body with approximately 60 entities registered (without restriction regarding membership in SERC).
- In 2008 SERC presented updated information on Reliability Standards to stakeholders at five system operator workshops, three compliance seminars, four standing committee meetings and numerous WebEx sessions. Particular emphasis was placed on vegetation management, system protection, personnel training and other key standards. Stakeholders were able to gain a better understanding of the Reliability Standards and lessons learned from compliance implementation.
- SERC provided transparency to registered entities by publishing generic summaries describing how Reliability Standards were being applied by compliance staff in the field and common reasons for noncompliance. This effort has served to clarify the Standards and improve compliance within the region.
- SERC has initiated a procedure to allow registered entities to request clarification on how a Reliability Standard will be applied by compliance staff in the field. Any opinions are published publicly but are advisory only and do not modify or add to the mandatory aspects of the Standard itself. This procedure was approved in September 2008 and has been used to address approximately 40 requests for clarification to date.

**B. Explain how the Regional Entity has the ability to develop regional standards and has a standards development process that provides for openness, due process and balancing of interests.**

Regional standards development is governed by the SERC Regional Reliability Standards Development Procedure ("Standards Process"), which was conditionally approved by FERC in April 2007 and approved in March 2008. SERC does not take any exceptions in its procedure with any of the essential criteria determined by NERC in the pro forma regional entity delegation agreement and SERC has complied with all FERC directives related to a regional standards development process.

The SERC Standards Process provides for openness, due process, and balancing of interests. Participation in SERC's Standards Process is open to all organizations or persons that are materially affected by the bulk power system in the SERC region. SERC does not require any financial fees for participation and strives to minimize participant costs through extensive use of



email, WebEx, and electronic postings to conduct as much business as possible with regard to standards development. All standards-related meetings are open to the public.

Each person or entity has the right to participate by expressing an opinion, having its opinion considered, and having the right to appeal. Notices of all meetings of the SERC Standards Committee and drafting teams are provided on the SERC website, at least seven days in advance. The site allows all interested parties to submit comments during the commenting period. SERC also provides an appeals process.

In anticipation of a first regional reliability standard on the subject of under-frequency load shedding coming to a ballot in 2009, SERC formed a registered ballot body in December 2008. The ballot body is open to all interested stakeholders and includes both members and non-members of SERC.

The SERC Standards Process provides for a balance of interests in the approval of standards. The ballot pool comprises seven sectors carrying twelve votes: investor-owned – 3 votes; federal/state – 2 votes; cooperative – 2 votes; municipal – 2 votes; merchant generator – 1 vote; marketer – 1 vote; and ISO/RTO/customer – 1 vote. A two-thirds supermajority weighted vote is required to approve a regional standard. Thus, no two segments can control a vote, and no single segment can veto an action.

Any requestor, whether a member of SERC or the registered ballot body or not, may propose a regional standard for development in accordance with SERC's Regional Reliability Standard Development Procedure, although no additional requests have been received to date.

**C. State Regional Entity's assessment of its own effectiveness in reliability standards development since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

SERC has been fully compliant and effective in reliability standards development as described above. Given that SERC is focused on supporting development of uniform North American Reliability Standards and not regional differences, SERC's effectiveness in the area should not be measured by the number of regional reliability standards approved.

SERC does have plans to develop regional reliability standards as required by the NERC three-year plan and would consider development of other regional standards if a reliability need is identified. More importantly, SERC is effective in assisting stakeholders in the region engage in the NERC standards development process, as well as regional standards proposed in other regions outside SERC. SERC actively facilitates review and comments by technical committees.

Stakeholder feedback for SERC on the assessment survey appears to be mostly influenced by experience with the NERC standards process. For example, the two factors most highly rated – SERC has developed reliability standards that clearly indicate which owners, operators, and users must comply (rating of 1.61 with 18 respondents to Question 5) and the standards process has been open and inclusive (rating of 1.65 with 17 respondents to Question 9) – appear to reflect overall experience with NERC standards development. Likewise, the ratings on the other end of the spectrum (which is still in the positive range) also appear to be attributable to the NERC standards development results to date. Question 6 (rating of 2.38 by





16 respondents) indicates a neutral to moderate agreement that the standards provide a clear indication of level of performance. It would be difficult to attribute these views to the SERC process and standards, because SERC has not yet completed approval of a regional standard.

In Question 13 (rating of 2.77 with 22 respondents) stakeholders give a somewhat neutral response regarding provision of clear information regarding what level of performance is necessary to comply with reliability standards. This point is of interest because, although it is also referring to NERC Reliability Standards, this is an issue SERC has worked to address. SERC believes this rating can be improved by not only writing clearer standards, but also by providing clear, experience-based information on how standards are being enforced in the field.

**D. State any proposals of Regional Entity to improve its effectiveness in reliability standards development.**

SERC has identified the following recommendations for further improvement:

- SERC will continue to support and expand the information available to bulk power system owners, operators, and users regarding what level of performance is necessary to comply with Reliability Standards. This information is to be provided through publication of non-confidential compliance audit and enforcement experiences and by responding to requests for clarification of standards.
- SERC will encourage a more robust technical review of proposed Reliability Standards within its technical committees and prepare comments to promote standards that improve reliability, provide greater clarity in the requirements, and are practical to implement.
- SERC will continue to expand the size and diversity of the SERC Registered Ballot Body.
- SERC will complete development of a Standards section on its web site.



### III. Organization Registration and Compliance Monitoring and Enforcement Program

#### A. Describe Regional Entity's activities and accomplishments in OR/CMEP since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007. This description should emphasize quantitative information, e.g.: staffing; numbers of registered entities registered; numbers of workshops, seminars, training and education sessions, etc. conducted; numbers of compliance audits conducted and reports processed; numbers of other compliance processes conducted and processed, e.g., spot-checks, self-certifications, etc.; numbers of notices of violation issued and processed; numbers of mitigation plans processed.

As a regional entity, SERC implements the NERC Compliance Monitoring and Enforcement Program ("Compliance Program") to monitor, assess, and enforce compliance with Reliability Standards by bulk power system owners, operators, and users registered in SERC. SERC's Compliance Program is responsible for conducting all compliance assessments, recommending confirmation or dismissal of violations, and recommending penalties and sanctions.

SERC does not provide any functions of a bulk power system owner, operator or user and is independent from the entities it oversees for compliance. Employees are required to complete an annual conflict of interest form and SERC's policy is that employees have no financial interest in any entity in the energy sector, except that retirement plans from previous employers may be addressed through recusal. This positive view of SERC's independence as a regional entity is borne out by stakeholder ratings in the assessment survey (rating of 1.52 by 21 respondents to Question 63 and 1.61 by 18 respondents to Question 65).

The SERC compliance staff makes the initial determination of alleged violations and proposes appropriate penalties and sanctions in accordance with the NERC Compliance Monitoring and Enforcement Program and the Penalties and Sanctions Guidelines. The staff evaluates each alleged violation and recommends an appropriate sanction and penalty.

The SERC Board of Directors has delegated responsibility for oversight of the SERC Compliance Program to the Board Compliance Committee. The Board Compliance Committee provides final confirmation of all alleged violations and proposed sanctions and approves settlements recommended by the SERC compliance staff for submittal to NERC and FERC for final approval. The Board Compliance Committee also acts as the hearing body responsible for resolving any disputes related to a violation or a proposed penalty or sanction or a remedial action directive.

Compliance Advisory Groups, consisting of stakeholder technical experts across all sectors are available for each of the major disciplinary areas (operations, planning/engineering, and cyber security) to advise the compliance staff and the Board Compliance Committee as needed, but do not have a role in recommending or approving any compliance actions and are not privy to confidential compliance information regarding any specific case.

SERC's compliance staff is divided into an enforcement branch and an audit branch. SERC audit staff is charged with conducting compliance audits and spot checks of all registered entities and identifying possible alleged violations. The group maintains a long-range compliance audit plan that ensures compliance audits are conducted for each applicable registered entity within the SERC Region in accordance with a predefined frequency. Qualified



senior SERC staff leads each on-site compliance audit team, composed of a combination of SERC auditors and in some cases volunteer industry subject matter experts. The teams prepare audit reports with their findings and recommendations, including the identification of any possible alleged violations. Specific lessons learned from each audit are factored into the audit program to promote continuous improvement. Audit staff also provides technical expertise in support of the compliance enforcement staff.

SERC's compliance enforcement group evaluates all possible alleged violations of Reliability Standards, whether identified in an audit, a self-report, complaint, or other source, and determines whether the facts and circumstances warrant further action as an alleged violation. For each possible alleged violation identified by any of the eight monitoring methods set forth in the CMEP, the staff creates a unique tracking number and associated docket to record the activities and documents and completes a thorough assessment of the alleged violation. The staff informs the affected entity of the assessment of an alleged violation. Once the assessment is completed, the staff will formally notify the entity of its findings regarding the violation and any applicable proposed penalties or sanctions. The enforcement staff may also engage in settlement negotiations with the entity.

Once a confirmed violation is established, by the registered entity either accepting the violation or not responding to the Notice of Alleged Violation; or if the registered entity and enforcement staff agree on terms of a settlement agreement, the confirmed violation or settlement agreement is submitted to the Board Compliance Committee for approval, along with any proposed penalty or sanctions. If, prior to establishment of a confirmed violation or execution by the entity of a settlement agreement, the entity challenges the findings and requests a hearing, the enforcement staff would prosecute its case before the Board Compliance Committee, who would then become the hearing body. Hearings are conducted at SERC under the supervision of a qualified, independent hearing officer hired by SERC. SERC has retained the services of three hearing officers, but as of June 2009 has not entered into a hearing proceeding.

The enforcement staff is also responsible for evaluating and accepting mitigation plans. All mitigation plans involving High Violation Risk Factor requirements and non-documentation related Medium Violation Risk Factor requirements must be accepted by the Board Compliance Committee prior to submittal to NERC. The enforcement staff monitors progress of the entity in achieving the mitigation plan including review of supporting material submitted by the entity to substantiate closure.

Once all proceedings have been completed, the compliance enforcement staff files the case with NERC for review and approval, subject to final approval by FERC.

Compliance enforcement staff is responsible for maintaining the current list of registered entities within SERC and for administering other monitoring processes including self-reporting, complaints, and self-certifications.

Since the early stages of preparing to become a regional entity, SERC recognized the importance of the compliance function at the regional level and has continuously maintained approximately half of its staff in the compliance area during 2007 and 2008. At the end of June 2009, SERC has employed 22 personnel within the Compliance department. This emphasis in compliance staffing has placed SERC in the position of being able to make significant headway in resolving the violations discovered in the first two years of operation.



## **Compliance Monitoring Activities 2007 through May 31, 2009:**

### **January 1, 2009 through May 31, 2009**

- SERC has approximately 225 entities on the NERC Compliance Registry.
- SERC processed 2,379 self-certifications in early June 2009.
- SERC has processed 105 data submittals for BAL-001 (CPS).
- SERC has processed 14 data submittals for BAL-002 (DCS).
- SERC conducted 19 audits in 2009. Eight audits were stand-alone audits of SERC registered entities. Three audits were conducted in conjunction with multiple regions for entities registered in SERC and in one or more other regions. One audit was conducted in conjunction with another region for an entity registered in that region. Seven audits were conducted by other regions in multi-regional audits of entities registered in SERC and the other regions. Between 3 and 38 standards were reviewed at each audit for a total of 278 Standards and 1798 requirements for all audits conducted in 2009.
- SERC conducted CIP spot checks of four entities (Table 1 entities per CIP Standards Implementation Plan), covering the 13 requirements of six Standards for which compliance was mandatory and enforceable as of July 1, 2008.
- SERC has held two compliance seminars; total attendance was 182 participants.
- SERC held compliance open forum web conferences on January 27, 2009 and April 27, 2009. Approximately 100 stakeholders attended each conference. The purpose of each open forum was to provide SERC registered entities with an update on the Compliance Monitoring and Enforcement Program (CMEP) including recent developments, lessons learned and key messages. An update on the Audit and Spot Check program, reporting of vegetation, 2009 filing dates, and mitigation plan content, and mitigation plan evidence were also discussed at the January conference. CIP Standards, PRC-005 lessons learned and the multi-regional entity audit process were highlighted in April.

### **2008**

- SERC processed 5,505 self-certifications.
  - 860 self-certifications were related to CIP-002 to CIP-009.
  - 4,645 self-certifications were related to all other Reliability Standards.
- SERC processed 361 data submittals for BAL-001 (CPS).
- SERC processed 60 data submittals for BAL-002 (DCS).
- SERC conducted 49 audits within the region and 2 joint audits with other regions. Between 6 and 49 standards were reviewed at each audit for a total of 899 for all audits in 2008.
- SERC conducted spot checks of four standards at five entities.
- SERC conducted CIP spot checks of four entities (Table 1 entities per CIP Standards Implementation Plan) covering the 13 requirements of six Standards for which compliance was mandatory and enforceable as of July 1, 2008.



- SERC held three compliance seminars; total attendance was 385 participants.
- SERC held a compliance open forum web conference on October 29, 2008, attended by approximately 125 stakeholders. The purpose of the open forum was to provide SERC registered entities with an update on the Compliance Monitoring and Enforcement Program (CMEP) including recent developments, lessons learned and key messages. An update on NERC and Regional Reliability Standards was also provided.
- SERC conducted 2 on-site Compliance Program orientation workshops for newly registered entities, attended by approximately 30 individuals from 12 new registered entities.
- SERC conducted 16 web-based training sessions explaining the process for submittals of self-certifications and other required data, attended by approximately 300 individuals from 130 registered entities.
- SERC audit staff and several members of compliance enforcement staff participated in NERC web based training for auditors, attended the lead auditor training, and also were trained by an outside firm presenting supplemental auditor training techniques used by financial auditing firms. An investigations training session conducted by FERC was also attended by many of the SERC compliance staff.
- SERC conducted one Compliance Violation Investigation and participated in a second Compliance Violation Investigation led by another region.
- SERC conducted a survey of its registered entities to solicit feedback regarding SERC's implementation of the CMEP. 68 registered entities (30%) took advantage of the opportunity and provided valuable feedback. SERC was rated 4.2 overall on a 5-point scale.

## **2007**

- SERC processed 3,089 self-certifications, which included the CIP survey results.
  - 351 self-certifications were CIP-002 to 009 related.
  - 2,738 self-certifications were related to all other Reliability Standards.
- SERC implemented a portal-based interface for electronic submittal of registered entity status reports on the CIP-002 to CIP-009 Standards.
- SERC performed 31 onsite audits within region and 3 joint audits with other regions. Between 6 and 28 Standards were reviewed at each audit for a total of 377 standards reviewed for all of the audits.
- SERC initiated a program to survey the audited entity for feedback on the process after each audit. This program has been successfully continued in 2008 and 2009.
- SERC collected 1,828 data submittals, including the following:
  - 357 CPS data submittals.
  - 60 DCS data submittals.
- SERC conducted one compliance investigation.
- SERC did not conduct any spot checks in 2007.



- SERC conducted three compliance seminars with a total attendance of 355 participants.

### Summary of Compliance Enforcement Actions

Summary of the number of violations assessed and processed between January 1, 2007 and May 31, 2009.

Violation Timeframe	Number of Possible Violations Reviewed	Number of Violations with Sufficient Basis	Number of Possible Violations Dismissed or Unenforceable	Notices of Alleged Violation Filed (#Violations)	Notices of Confirmed Violation or Settlements submitted to NERC (#Violations)	Number of Violations Complete, filed with FERC
2007 Pre-June 18	144 <sup>3</sup>	71	73	71	N/A	(9 Violations moved to Post-June 18 Status)
2007 Post-June 18	137	84	53	84	84	78
2008	175	128 <sup>4</sup>	44	8	46	17
January 1 to May 31, 2009	35	4	6	0	0	0

Summary of the number of mitigation plans processed through May 31, 2009.

Mitigation Plan Timeframe	Number of Violations with Mitigation Plans Submitted	Number of Violations with Mitigation Plans Accepted and Approved by SERC and NERC	Number of Violations with Mitigation Plans Certified as Complete by Registered Entity	Number of Violations with Mitigation Plans Verified as Complete by SERC
2007 Pre-June 18	71	70	70 (9 Violations moved to Post-June 18 Status)	69
Post-June 18, 2007	84	84	84	84
2008	113	98	105	103
January 1 to May 31, 2009	9	4	0	1

<sup>3</sup> Violations were reported by standard and can include multiple requirements for Pre-June 2007 violations.

<sup>4</sup> 101 violations are presently in settlement discussions.



**B. Describe how the Regional Entity has the ability to enforce Reliability Standards and to provide for an adequate level of bulk power system reliability in its region.**

SERC is following the requirements as defined by the CMEP, Rules of Procedure (ROP), and the delegation agreement between SERC and NERC and has used these documents to create the framework for auditing and enforcement of Reliability Standards.

SERC has created and implemented an audit program designed around the required three and six year audit cycles and remains 100% on schedule with this plan. SERC uses the complete list of NERC-approved Actively Monitored Standards and Requirements as a minimum audit scope. SERC has also required all compliance employees, not just the auditors, to complete the NERC required training classes for auditors so that all employees have an understanding of the auditing process.

The enforcement group processes alleged violations originating from audits, spot-checks, self-certifications, complaints, self-reports, and Compliance Violation Investigations (CVIs). This includes managing settlement negotiations and hearings associated with contested violations. The SERC enforcement program is also responsible for investigating possible Reliability Standards violations arising from system events, self-reports, and complaints.

SERC also fully participates in multi-region forums to share information related to best practices. These include the Regional Entity Compliance Implementation Group (RCIG) and associated working groups. The RCIG's main purpose is to foster cooperation and coordination, and improve consistency between the regions. SERC also participates in the Regional Entities Management Group whose members are the chief executives of each region and oversee all program areas, including compliance and standards development.

SERC conducts supplemental training for auditors. All compliance staff go through weekly training sessions on process and the Standards.

**C. Describe how the Regional Entity has fair and impartial procedures for enforcing reliability standards.**

SERC is committed to the following five (5) guiding principles:

- Independence
- Ethics and integrity
- Inclusiveness
- Fairness and openness
- Organizational effectiveness and efficiency

SERC strives to be fair, unbiased and balanced in its actions and approach to enforcing Reliability Standards and strives to remain above reproach with regard to independence and ethical issues. SERC's internal procedures incorporate these concepts. To provide a second level of checks and balances, SERC requires that all violations be reviewed and verified by a group other than the group that initially identified the possible violation. It was partially for this



reason that the enforcement group was separated from the audit group. In addition, all violations and penalties are reviewed by the Director of Compliance prior to presentation to the Board Compliance Committee for approval.

All SERC employees and consultants must identify all potential relationships to or conflicts with market participants or registered entities and annually sign a conflict of interest form verifying their compliance with SERC's Code of Conduct.

SERC follows the CMEP requirements to provide biographies of all potential auditors prior to an audit to allow the subject entity to review these biographies and object to any potential or perceived conflicts that could impair fairness or impartiality. SERC also internally bars any employee from working on any compliance work related to an entity for which they have had a relationship for at least a one-year separation period.

SERC has implemented a Compliance Hotline to allow anyone to report compliance or ethics complaints related to SERC, its employees or consultants, or a registered entity. To date SERC has received no complaints from the Compliance Hotline and has received no complaints of any kind regarding any failure of fairness or impartiality.

At the end of every audit, SERC provides the NERC Questionnaire to allow the audited entity to directly report to NERC any concerns with fairness, objectivity or balance, in addition to other quality measures, with respect to how SERC carries out its auditing function.

**D. State Regional Entity's assessment of its own effectiveness in OC/CMEP since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

SERC's effectiveness has continuously improved over time through the enhancement of our internal processes, refinement in our organizational structure, the growing maturity of the NERC Reliability Standards, and the addition of talented staff. Added to this is our concerted effort to improve our communications with the other regions, NERC, and the registered entities. This has resulted in greater efficiency and fewer misunderstandings.

SERC was an early innovator in the use of settlements to address violations. Settlements have provided an effective means of detailing plans for the entity to address the violation and take further actions to improve reliability and compliance, beyond simply correcting the violation.

SERC developed and conducted a mock compliance hearing using the hearing procedures and included participation by NERC and other regions as a learning experience.

SERC developed a comprehensive set of internal procedures and instructions to guide staff in implementing the CMEP, including electronic tools and forms.

Since 2005, SERC has been an innovative leader in the development of the SERC Portal and the use of electronic forms for the submittal and management of compliance data. In 2008, five more regions and NERC adopted the SERC Portal to meet their compliance information management needs. SERC has facilitated the startup of a consortium to share resources and expertise in the continuing development of electronic tools to improve compliance information management.





SERC has championed providing transparency to registered owners, operators and users so that they can better understand what the expected compliant behavior is. SERC has posted lessons learned from field experience in the compliance program.

SERC successfully registered bulk power system owners, operators, and users. Registration resulted in more than a fivefold increase in the number of entities involved in reliability activities but with very few challenges. To date, one appeal of a SERC recommendation on registration was upheld by FERC.

SERC has been a leader in completion of compliance actions. SERC was able to submit 70 of its 2007 violations for approval by FERC in the July 3, 2008 Order. As of May 31, 2009 SERC Notices of Penalty addressing a total of 95 violations have been approved by the Commission.

SERC has initiated several process improvements to maintain quality, process remaining outstanding violations, and increase efficiencies of future compliance actions as follows:

- A structured work management process is used to review compliance actions to drive them efficiently through to the next processing step, including final regional approval. The process is being refined and metrics applied to further enhance productivity.
- SERC initiated a posting room within the SERC Portal for the secure posting of all documents associated with an audit, enabling the registered entity and all audit team members and observers to view documents prior to the audit.
- SERC initiates a WebEx with a registered entity prior to an audit to review documentation requirements and the flow of the audit.
- Final regional approval of all compliance actions is made by the SERC Board Compliance Committee (BCC). The BCC has delegated certain approvals to compliance staff to allow the BCC to focus on issues with the most impact.
- Members of SERC staff have been designated as Subject Matter Experts (SMEs) for specific sets of Reliability Standards. Members of compliance enforcement staff have been assigned as "process owners" for each of the key enforcement processes (violation determination, mitigation plans, penalty determinations, settlements, and reporting). A single point of contact (SPOC) from enforcement staff coordinates compliance actions with the applicable entity. Compliance staff SMEs are engaged to perform a peer check of mitigation plan closeout documentation to help ensure adequacy of mitigation plan performance.
- Quality controls and efficiency methods (checklists, peer reviews). Work is ongoing to improve quality and consistency of reviews, as well as improve efficiency in processing. Currently checklists and other tools are applied to support efficient processing.
- SERC has developed a compliance document management procedure and has contracted for development of an automated system.



Stakeholders provided the following positive feedback regarding the SERC compliance program in the ERO assessment survey:

- Staff conducts audits in a professional, thorough, efficient, and timely manner (rating of 1.38 by 16 respondents to Question 15 and rating of 1.93 by 15 respondents to Question 17).
- SERC encourages registered entities to conduct internal self-assessments and to self-report possible violations (rating of 1.43 by 23 respondents to Question 18).
- The compliance program covers all requirements and does not leave any gaps in monitoring (rating of 1.48 by 21 respondents to Question 12).
- SERC provides prompt and reasonable notice of audits and possible compliance violations (rating of 1.53 by 17 respondents to Question 14, rating of 1.59 by 17 respondents to Question 16 and rating of 1.80 by 15 respondents to Question 23).
- SERC is effective in ensuring timely mitigation of a possible violation (rating of 1.54 by 13 respondents to Question 21).

One area for improvement indicated by the survey results appears to be applicable to NERC and all of the regions together. That is making the penalties and sanctions understandable and clearly correlated to the seriousness of the offense (rating of 2.50 by 14 respondents to Question 19 and rating of 2.57 by 14 respondents to Question 20). Both sets of responses are only slightly better than neutral. This stakeholder perception should improve as more completed compliance actions are approved by the Commission and made public by NERC.

#### **E. State any proposals of Regional Entity to improve its effectiveness in OC/CMEP.**

SERC believes that the best way to improve effectiveness of the CMEP is for NERC and the regional entities to continue to consistently communicate and coordinate regarding new issues or confusion that may arise in the field. Even though the Reliability Standards have been enforceable for 24 months, they are still relatively new for both registered entities and the auditors.

SERC is working with registered entities to promote the concept of increased self-assessments by the entities to promote reliability and compliance. This is expected to also help the entities be more complete in the provision of evidence of compliance, which is an area for continuing improvement.

SERC intends to continue using settlements as a means of improving compliance programs within the region.

SERC recognizes the need to further educate registered entities with regard to what constitutes an appropriate and effective mitigation plan.

Continuing development and integration of the Compliance Portal, which is in process through the interregional consortium, should also help to continuously improve efficiency and effectiveness of the Compliance Program.



Remaining outstanding and backlogged work related to possible alleged violations and mitigation plans are projected for completion by close of the second quarter of 2009, with the exception of closeout reviews for a few longer duration mitigation plans.

SERC was a key contributor in the development of a pro-forma settlement agreement, working in conjunction with NERC and the other regions. SERC is also working with NERC and the other regions to develop and pilot an expedited settlement process for lower risk violations. Work is ongoing to ensure the process meets FERC's expectations for level of detail in the record of enforcement actions and that the process is applicable to a sufficient set of violations so as to be effective.

SERC needs to improve ongoing review and maintenance of the compliance registry.

A document management system is being pursued. It is estimated that a document management system would be in place by the third quarter of 2009 and will facilitate processing of violations, and development and retention of the record of enforcement actions.

One of the challenges SERC has faced is the high volume of materials to be presented for the SERC BCC. SERC has taken steps to be more efficient in giving the BCC the key information needed for effective decision-making.



### **III. Other Program Areas**

#### **A. Reliability Improvement Program**

##### **1. Describe Regional Entity's activities and accomplishments in Reliability Readiness Evaluation and Improvement since January 1, 2007, including discussion of improvements in this area.**

Formerly this function was the Reliability Readiness and Evaluation Program. In 2009, SERC's Reliability Improvement Program continues to monitor implementation of reliability improvement recommendations. Recommendations may be derived from event analyses and apply to individual entities, a cross section of entities, or all entities registered within the region. Actions may also be identified in the form of NERC alerts. SERC's goal is to enhance reliability by facilitating implementation of recommendations and required actions and by tracking and reporting completion. SERC has established an online recommendations tracking tool to facilitate the data collection and reporting on completion of recommendations.

SERC conducts several functions that are very closely related to reliability improvement but are presented separately in the SERC business plan to be consistent with NERC's division of functions. In addition to the reliability improvement function described above, SERC performs a situation awareness function by reporting normal daily conditions on the bulk power system and reporting elevated risk conditions when they occur. SERC also coordinates information in response to an event on the bulk power system. SERC conducts event analyses as needed, in coordination with applicable registered entities, NERC, and FERC.

In 2007, SERC supported NERC in 11 readiness reviews and one in 2008 as the program focus shifted. SERC also certified MISO as a balancing authority.

##### **2. State Regional Entity's assessment of its own effectiveness in Reliability Readiness Evaluation and Improvement since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

SERC needs to continue developing and improving its recommendations tracking tool and to facilitate adoption of the tool by NERC and others as part of the Portal implementation. This recommendation is supported by stakeholder inputs in the survey (rating of 2.56 by nine respondents to Question 9).

#### **B. Training, Education and Operator Certification**

##### **1. Describe Regional Entity's activities and accomplishments in training, education and operator certification since January 1, 2007, including discussion of improvements in this area.**

Historically, SERC has taken a proactive role in the advancement of technical personnel training and development. Through its annual program of seminars and workshops, SERC has promoted improved performance in planning, operation and critical infrastructure protection of the bulk power system. SERC has a reputation for facilitating and providing forums for member interaction and exchange of continuing education activities, such as "lessons learned", emergency drills, and inter-area event simulations.



SERC's training services staff works closely with the appropriate SERC and NERC committees to facilitate the development of effective technical personnel training programs for SERC members and SERC staff in the areas of system operation and operator certification, planning, audits, and compliance. The program methods include needs analyses, identification of performance gaps, design of behavioral learning objectives, development of training materials, program implementation, and evaluation. Additionally, the training function works to assist SERC member companies in providing instructors who are qualified and prepared to deliver the training programs, in accordance with systematic instructional design procedures. The specific continuing education requirements of the members form the basis of current topics, agendas, and venues for SERC-sponsored training seminars and workshops.

To meet its goals, the SERC training program relies heavily on the technical expertise and training experience of SERC committee members. It is expected that the System Operator Subcommittee of the Operating Committee will continue to make a significant contribution to both the development and delivery of SERC training activities, as they have done in the past.

The number of workshops, seminars, training, and education sessions conducted since January 1, 2007 is:

- CIP workshops on how to implement the CIP standards – 2
- Operator training workshops – 13 (4 in 2007 and 5 in 2008 and 4 in 2009)
- Compliance seminars – 9 (3 in 2007 and 4 in 2008 and 2 in 2009)
- Train-the-trainer workshops – 3 in January 2009

SERC has automated the recordkeeping for system operator certification within the region. A database was developed and populated with approximately 1000 operator records dating to April 2006. The database has been in operation with full availability since June 1, 2008.

**2. State Regional Entity's assessment of its own effectiveness in Training, Education and Operator Certification since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

Over time SERC has added additional topics to its training program, such as the recent CIP Workshop, and has provided greater depth to our traditional Reliability Standards workshops through the greater use of panel sessions and lessons learned segments.

SERC's operations training seminars continue to run at full capacity with some attendance from industry participants from outside our region, due to the quality of the seminars.

SERC strives to support and speak at seminars in the SERC region held by other organizations, in order to provide the most information to the widest possible group of people.

**3. State any proposals of Regional Entity to improve its effectiveness in training, education and operator certification.**

SERC will continue to request, review, and incorporate helpful feedback from stakeholders regarding SERC's training, education, and operator certification programs. SERC will also



modify these programs as needed to incorporate any changes to NERC Reliability Standards or procedures.

### **C. Reliability Assessment and Performance Analysis Program**

#### **1. Describe Regional Entity's activities and accomplishments in Reliability Assessment and Performance Analysis since January 1, 2007, including discussion of improvements in this area.**

As a regional entity, SERC collects and compiles data from users, owners and operators of the bulk power system in the region, and submits that data to NERC. In addition, SERC conducts assessments of reliability and adequacy of the region's bulk power system and reports its findings to NERC. SERC also prepares special reliability assessment reports on regional issues as conditions warrant or as requested by the SERC Executive Committee.

In January 2008, SERC separated the Reliability Assessment Program from Reliability Services in recognition of the importance of this function. A Director of Reliability Assessment was hired to lead the program.

This program is coordinated by SERC staff and makes extensive use of stakeholder volunteer experts in SERC's Reliability Review Subcommittee (RRS). The supporting inter-regional studies for the reliability assessments are performed by regional studies groups (Long-Term Power Flow Study Group, Near-Term Power Flow Study Group, Dynamics Study Group, and Short Circuit Database Working Group). Inter-regional and interconnection-wide coordination is accomplished through the Eastern-Interconnection Reliability Assessment Group (ERAG). An ERAG Management Committee (MC) oversees the development of an annual series of power-flow and dynamics base-cases by a Multi-regional Modeling Working Group (MMWG). The ERAG MC and MMWG are each comprised of two representatives from each region. These ERAG-MMWG models form the basis from which most wide-area interconnected system studies are performed. Funding for ERAG-MMWG activities is allocated across the six regional entities in the Eastern Interconnection based on Net Energy for Load (NEL).

One of the primary charges of the SERC RRS is to annually perform reliability assessments. These assessments are done in the form of seasonal assessments of the SERC Region in support of the NERC Reliability Assessment Subcommittee's Summer and Winter Reliability Assessments and a ten-year reliability assessment of the SERC region, from which a condensed version is also created in support of the NERC Long-term Reliability Assessment. The RRS has also prepared a separate annual SERC ten-year reliability assessment report since 1979. The report includes (both on a regional and sub-regional basis) a resource adequacy assessment, a transmission assessment, and a discussion of significant reliability issues impacting the SERC Region. The DRS provides input to the RRS for this report on pertinent stability-related reliability issues and develops stability-related reliability assessments for the sub-regions and region. While the report has evolved over the years, it has generally had a format similar to the NERC Reliability Assessment Subcommittee Long-term Reliability Assessment report. This report is presented annually to both the SERC Engineering Committee and the SERC Executive Committee. This has led to a variety of SERC Board initiatives over the years addressing reliability in the SERC region.



The SERC DCTF's primary function is to provide reporting parties' required data per the NERC reliability assessment requests. Data collection activities are carried out on the SERC Portal. The SERC Portal is used to specify data requirements and due dates for each data collection effort. The SERC staff maintains and manages areas of the SERC Portal containing reliability data requirements. Additional communication from the SERC staff to the DCTF is accomplished via announcements on the Portal, email, phone conferences, and SERC Data Collection Task Force meetings. The SERC staff aggregates the data, performs data checks and analyses, and compiles the data for the Region's reliability assessments data submittals.

**2. State Regional Entity's assessment of its own effectiveness in Reliability Assessment and Performance Analysis since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

SERC has significantly improved in its effectiveness in this area. In 2008, as staff was added, SERC became much more proactive in assessing and addressing reliability performance issues. As with most new programs, a great deal of effort has gone into defining how to best work with SERC stakeholders to build this program and to increase SERC's ability to affect change.

SERC also made significant strides in 2008 with regard to automating data collection and validation through the use of the SERC secure portal.

In 2008 SERC completed a review of resource adequacy metrics used across various jurisdictions within the region.

SERC stakeholder comments on the ERO assessment survey lend support to the notion that SERC is meeting expectations in this area:

- Rating of 2.00 on Question 32 by 13 respondents indicating SERC is effective in performing accurate and independent assessment of future reliability and adequacy.
- Rating of 2.13 on Question 34 by 15 respondents indicating SERC effectively communicates reliability assessment results.

**3. State any proposals of Regional Entity to improve its effectiveness in Reliability Assessment and Performance Analysis.**

SERC is continuing to develop concepts and methods for reliability performance analysis and assessment (see rating of 2.25 on Question 36). NERC's initiation in 2008 of the Transmission Availability Database System (TADS) will provide a source of data in future years to improve the metrics for transmission performance. SERC is exploring concepts in this arena.

**D. Situational Awareness**

**1. Describe Regional Entity's activities and accomplishments in Situational Awareness and Infrastructure Security since January 1, 2007, including discussion of improvements in this area.**

SERC does not provide a reliability coordinator function.



For the purpose of consistency with the NERC budget and business planning process and to facilitate comparison with other regional entities, SERC has incorporated situation awareness and critical infrastructure protection into its business plan. However, in practice, SERC implements these functions separately. The situation awareness role in SERC is more closely tied to bulk power system operations; and SERC uses staff and groups expert in operations for this function, including the SERC Reliability Coordinator Subcommittee. Critical infrastructure protection is aligned in practice with SERC's Critical Infrastructure Protection Committee, one of SERC's four standing committees.

SERC maintains effective situational awareness and helps ensure that Reliability Coordinators, Balancing Authorities, Transmission Operators and appropriate regulatory personnel are aware of situations as needed to maintain timely awareness of conditions that present an elevated risk to the reliability of the bulk power system. SERC accomplishes effective awareness by working closely with Reliability Coordinators in the region and through use of the SERC Hotline during significant events or adverse conditions. SERC also achieves situation awareness in the region through effective use of publicly available information as well as NERC situational awareness tools including the System Data Exchange (SDX), the Reliability Coordinator Information System (RCIS), and the Central Repository for Security Events (CRC).

This program also includes resources to lead or participate in event analyses as may be required. Event analysis presents a highly uncertain work demand on staff, as the number of events involving SERC, if any, can vary; yet each analysis is an extensive commitment of resources.

SERC has established and maintains a SERC Hotline for use by Reliability Coordinators, Balancing authorities and Transmission Operators during critical situations. SERC maintains the procedures and conducts a monthly test of the hotline.

SERC also implemented a situation awareness reporting line in July 2007. This allows entities to report events or conditions on their system by phone message or email. Key SERC staff are immediately notified of any such reports by instant message forwarding.

SERC has developed emergency response plans and communications plans for use within the region. SERC has developed procedures for event analysis that shares best practices with NERC and the other regions.

SERC, working with NERC and the other regional entities, has developed a daily report for situation awareness used within the region. The daily situation report is reviewed with SERC management and key staff and provided to NERC and FERC each morning.

**2. State Regional Entity's assessment of its own effectiveness in Situational Awareness and Infrastructure Security since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

SERC has one full-time staff person dedicated to situation awareness and one dedicated to critical infrastructure protection. The situation awareness staff is effective in developing a daily situation report addressing conditions on the bulk power system, and also in providing an initial evaluation of system incidents or events. The situation awareness staff has direct access to NERC and reliability coordinator information systems to monitor activities. SERC has initiated





both telephone and email based reporting lines for the submittal of DOE-417's and other incident reports. Entities within the region have demonstrated they are very reliable in reporting incidents to SERC to maintain the region's awareness of conditions on the bulk power system.

SERC regularly reviews these incident reports and works with the entities involved to determine the impact on the bulk power system. SERC reports the results of its analysis to NERC and FERC in a timely manner and addresses any questions they may have.

SERC demonstrated its situation awareness capability for approximately one continuous month following Hurricanes Gustav and Ike. SERC staff maintained continuous awareness of the impacts of the storms and the restoration efforts that followed in the weeks after. SERC situation awareness staff operated on seven-day weeks during this period.

Stakeholder responses to Questions 42 and 49 indicate this as an area for continued improvement, not just at SERC but more broadly across NERC and all regions.

### **3. State any proposals of Regional Entity to improve its effectiveness in Situational Awareness and Infrastructure Security.**

SERC is working closely with FERC staff, NERC, and other regions to develop a near-real-time situation awareness capability. SERC has established a situation room in its office and plans to participate in the FERC-directed project. SERC anticipates having bulk power system status information from the seven Reliability Coordinators in the region available for display with approximately 90-second updates.

SERC will use this information to remain aware of conditions on the bulk power system, conduct assessments of reliability impacts of incidents or events, and prepare reports to NERC and FERC.

SERC has collected system maps from entities within the region and particularly relies on sub region maps. However, SERC has a need to improve its ability to visualize the bulk power system through integrated region-wide maps.

SERC has an opportunity to continue improving communications following system events or natural disasters. Experience during 2008 indicated that entities involved typically are bombarded by various state and federal governmental agencies for information. Involvement by SERC and NERC simply add to the confusion. There is an opportunity to better define communications templates and responsible contacts that can provide more rational reporting of information without increasing the burden on the entities involved.

## **E. Critical Infrastructure Protection**

### **1. Describe Regional Entity's activities and accomplishments in Infrastructure Security since January 1, 2007, including discussion of improvements in this area.**

SERC's Critical Infrastructure Protection Program mirrors that of NERC, but with a focus on regional issues. The program is supported by the SERC Critical Infrastructure Protection Committee. The program will continue outreach to the industry by providing 'how to' workshops



and forums within the region. SERC staff and stakeholder representatives also actively participate in the NERC CIP program and CIPC.

The CIP resources here are distinct from those in the Compliance Program. The role here is focused on improvement and assistance, while the Compliance Program CIP resources are focused on compliance monitoring and enforcement.

In recognition of the importance of CIP in the SERC region, on June 5, 2008 the SERC Executive Committee directed the following initiatives:

1. For the purpose of verifying registered entity self-certifications and self-reports regarding cyber security standards CIP-002 to CIP-009, the Compliance Program initiated a program to spot check a subset of the self-certifications during the period from July 1, 2008 to July 1, 2009.
2. SERC Reliability Services Program initiated tracking of work to address the Aurora vulnerability by adding this as a recommendation in the Recommendations Tracking Program of the Portal.
3. SERC developed a contact list for all registered entities within the region for the purpose of communicating security-related alerts.
4. SERC accelerated the hiring of a highly qualified CIP Manager from January 2009 to “as soon as possible within 2008”.
5. SERC took the lead in forming an interregional coordination group with a representative from the staff of each region (and NERC) to coordinate CIP activities.

Additionally, at its October 2008 meeting, the SERC Board of Directors directed that SERC conduct a pilot review of risk-based methodologies, critical asset lists, and critical cyber asset lists. SERC conducted nine reviews in the first quarter of 2009.

**2. State Regional Entity’s assessment of its own effectiveness in Infrastructure Security since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

SERC has been effective in communicating CIP issues to registered entities. SERC has conducted two CIP workshops within the region. SERC successfully completed the first cycle of self-certifications to the CIP-002 to CIP-009 standards in July 2008 and achieved 100% participation by required entities.

SERC does not perform any operational functions and has determined that it does not have any critical cyber assets. However, in the interest of assuring business continuity and protecting sensitive information that may be in SERC’s possession, SERC has instituted security measures within its offices that are comparable to the applicable requirements in CIP-003 to CIP-009 as a matter of good practice.

In the stakeholder survey, feedback was positive regarding SERC’s role in support of CIP:

- Rating of 1.73 by 11 respondents to Question 45 regarding SERC’s role as a leader and facilitator in the CIP area.



- Rating of 2.0 by 12 respondents to Question 46 regarding SERC's role in disseminating CIP alerts and sharing information.

### **3. State any proposals of Regional Entity to improve its effectiveness in Infrastructure Security.**

Like other regions and NERC, SERC is working on improving the communication and tracking of responses to security alerts.

SERC continues to work on procedures for allowing SERC staff to perform their delegated responsibilities while protecting sensitive information. Of particular challenge is the need to retain audit and compliance records for which evidence of compliance can itself be sensitive information.

#### **F. Technical Committees and Member Forums**

A hallmark of SERC's mission since its formation in 1970 has been its member-driven focus, relying on the technical expertise of volunteers from its member organizations to lead its technical committees. Participants in SERC committees and subgroups total more than 400 individuals, many of whom also provide volunteer technical support at the NERC level. As the regional entity, SERC will continue to promote a high level of participation by the best technical experts the region has to offer.

The SERC Operating Committee (OC) provides a forum for the discussion and resolution of operating reliability issues within the SERC Region and provides a mechanism for the coordination of activities in the area of operations. The purpose of the OC is to promote the reliability and security of the bulk power system. The OC achieves this purpose by actively participating in the NERC and regional standards development processes, evaluating system performance and events, developing recommendations to improve reliability, developing training and drills, and developing technical references (e.g., guidelines, procedures, white papers). The Operating Committee has created several subcommittees to provide technical assistance and advice on a continuing basis in specific areas of operations. As an example, the OC sponsored a SERC system restoration drill in May 2008, a system restoration tutorial by WebEx in April, 2009 and is planning another, more comprehensive drill to be conducted later in 2009.

The purpose of the Engineering Committee and its associated subgroups is to promote the reliability and adequacy of the bulk power system. The EC develops stakeholder inputs to the SERC reliability assessments, actively participates in the NERC and regional standards development processes, evaluates system performance and events, develops recommendations to improve reliability, and develops technical references (e.g., guidelines, procedures, white papers).

The purpose of the Critical Infrastructure Protection Committee is to promote the advancement of the physical and cyber security of the bulk power system, through the development of SERC Regional Reliability Standards and other physical and cyber security documents (e.g., guidelines, procedures, white papers). It serves as an expert advisory panel in the areas of physical and cyber security; establishes and maintains an information reporting procedure; provides a liaison with state government agencies; and conducts forums and workshops related to Critical Infrastructure Protection.



#### **IV. Budgeting**

##### **1. Describe Regional Entity's activities and accomplishments in the development and submission of its annual business plan and budget, beginning with the 2007 business plan and budget.**

SERC has established a finance group comprised of a manager of finance, who is a former finance auditor, and an accountant. The current staffing allows for appropriate financial controls and the necessary expertise for budgeting and finance.

Since 2007, SERC has taken several steps to improve its ability to develop accurate budgets. SERC has implemented an online timesheet system that allows allocation of staffing costs to various activity codes in the NERC chart of accounts used in the budget process. Expense reports likewise are entered using an online system and provide cost code tracking. All other expenses are entered into the SERC accounting system at point of entry. This automation has allowed SERC to track costs precisely and to use the resulting reports to both control costs and develop accurate forecasts of future expenses.

Concurrent with its move from Birmingham to the Charlotte office, SERC converted from a paper-based filing system to all-electronic record keeping. This switch and improved automation allow SERC to have better access to files and records and apply historical information for better forecasting.

As a result of the growth of the organization and new reporting requirements from becoming a regional entity, SERC switched from an in-house accounting system to a commercially developed accounting system. SERC also initiated a finance and controls procedure.

To improve the planning and management of payroll expenses, SERC contracted a market-based study of SERC's compensation and benefits, including human resource practices. SERC has used this information to guide planning and budgeting of payroll and benefits to ensure SERC is competitive yet is able to effectively manage costs. SERC has implemented the improvements to benefits and human resource procedures as detailed in the reports by the external contractor.

SERC makes it a priority to diligently and effectively communicate with NERC regarding all required financial reports. SERC will continue to keep this as a priority and will continue to provide all required financial reports on or before the date due.

In 2008, SERC established a separate cash investment account for the segregation of any fines and penalties, to ensure such monies are not commingled with operating funds. In coordination with NERC and the other regional entities, SERC established a process for the accounting of fines and penalties.

##### **2. State Regional Entity's assessment of its own effectiveness in developing its business plans and budgets and in the submission its business plans and budgets in a consistent manner with NERC and the other Regional Entities.**

SERC is fully capable of developing quality business plans and budgets that are consistent with NERC and other regional entities. SERC, along with NERC and the other regions, made



significant strides during the 2009 business planning cycle with regard to uniformity of account descriptions, allocation of costs, and financial reporting. The Commission recognized these improvements in its October 16, 2008 Order conditionally approving the business plans and budgets.

SERC has been able to improve its budgeting estimates and processes since its submission of its 2007 business plan and budget, primarily because the expectations of regional entities have become clearer over the past two years and SERC has gained experience in performing regional entity duties. SERC was effective in both 2007 and 2008 with regard to business planning and budgeting. In 2007, actual operating costs were \$206,000 under budget in an \$8M budget (within 2.5% of target). SERC achieved similar results in 2008.

SERC followed all NERC guidance and templates in preparing its 2009 business plan and budget and was required to obtain SERC Board approval before the final submission to NERC. In addition to process improvements made by NERC for the 2009 business plan and budget process, SERC leveraged improvements made to its time-tracking and financial operations implemented in 2008 to further improve the process for 2009. SERC has and will continue to make improvements to its financial function and it is confident that these changes will enhance future period budget requests.

SERC will continue to work with the other regional entities to strive for even greater consistency in budgeting and in the creation of uniform metrics. The improvement in the consistency of the nine start-up entity business plans and budgets, as expectations and duties for these entities have continued to evolve over the past two years, seems quite good. Due to the varying structures of the regional entities, there could still be differences in how each organization prepares its respective operating budgets, but, particularly in light of the October 16, 2008 FERC Order on the 2009 business plans and budgets, the regional entities will continue to discuss and harmonize any remaining differences with NERC and each other.

Stakeholder feedback to SERC in this area appear to support a conclusion that performance has been satisfactory in this area, with ratings of 1.80, 1.67, 1.78 on Questions 54-56 respectively, on topics of stakeholder inputs to budgets, fair allocation of costs, and adequate financial controls and reporting.

**3. State any proposals of the Regional Entity to improve its effectiveness in submitting effective, adequate and consistent business plans and budgets.**

SERC believes that NERC has set a good example by developing a three-year plan leading into its 2009 business planning cycle. SERC developed three-year goals in the first quarter of 2009 as a precursor to the 2010 business planning cycle. SERC encourages NERC and other regions to continue taking this same approach, updating the rolling three-year goals each year. It is important that the goals not be at too high a level and vague – goals should be sufficiently detailed and measurable as to provide a basis for effective decision-making in the annual budget cycle and for performance measurement after-the-fact. A rolling three-year planning horizon will enable the ERO and regional entities to more effectively manage organizational change and control costs.

A second improvement, also to be implemented in the startup phase of the business planning cycle would be for the regional entities and NERC to collaborate on a review of the NERC and



regional processes across various functions, including the interfaces between NERC and the regions. This process review would allow identification of any areas of duplication or inefficiencies and provide an opportunity for incremental improvements to be made each year.

SERC will continue to enhance its ability to track costs for its various activities. Greater detail in allocating costs across various functions and activities will lead to greater certainty in forecasting and controlling these costs in the future. SERC believes there is an opportunity for the regions and NERC to share best practices, and perhaps to share tools, to achieve a high level of consistency and quality in the tracking and reporting of costs. There may in fact be an opportunity to reduce the cost by using common budgeting and cost accounting tools.

One of the major uncertainties in business planning is the amount of resources needed for certain activities that can be more 'lumpy' in the assignment of personnel resources and budget. The two clearest examples are the number and cost of hearings and large event analysis. On one end of the spectrum there could be no hearings and no large event to address in a year. However, each region must plan some reserve for such occasions. SERC's approach, like other regions, has been to assume a very small number of hearings and large event analyses and a modest cost for each. There is some risk that these assumptions could be exceeded and the region would be at risk of quickly burning through its reserve required for operations.

SERC would propose consideration of a shared reserve among the regional entities, and perhaps NERC. Each entity would contribute a requisite amount to the common reserve and be entitled to use the reserve under certain conditions. Anyone using the reserve would be required to repay the reserve in the next business cycle. Such an approach would provide greater financial strength to all of the participants and provide a tool for managing risk and uncertainty regarding unexpected peaks in workload or legal expenses. As envisioned, each entity would retain operating reserves for normal business but participate in the reserve sharing for certain high risk and high cost activities. This approach would allow an appropriate coverage for budget uncertainties but at a much lower total cost through sharing of the risk.

SERC believes that NERC and the regional entities need to standardize language and expectations regarding the acceptable components of indirect costs so that the regions can consistently budget certain expenses as either indirect (overhead) or direct (functional). With two full years of experience, and in accordance with FERC guidance, NERC and the regional entities should be able to implement a uniform expense allocation that will enhance consistency among the regional entities and NERC.

One area of particular concern in SERC is the labeling of committee/forum activities as indirect. In SERC, stakeholder experts participating in committee activities are direct contributors to reliability improvements in the region, yet allocating that expense to half a dozen functional areas defined in the budget template is not practical or efficient.

SERC suggests NERC consider implementing a uniform budgeting tool, in place of the NERC-supplied Excel spreadsheet templates, to capture and project expected budgetary needs for each region. Due to the complexity of budgeting to the function level for so many entities, it would be useful if a common tool could be used by NERC and all regional entities. This could help improve efficiency and consistency by allowing each organization to prepare its budgets in a more automated fashion.



SERC believes that the adoption of uniform metrics would enable the identification of trends that would be useful for projecting future resource needs. NERC and the regional entities have already started making efforts toward this goal.

Additionally, given the experience of all the regional entities, and with the hope that its processes and templates will need fewer changes during 2009, SERC hopes to have time to work with other regional entities to identify and determine trended and comparative financial results for the 2009 operating year which will enhance the consistency of the regional entities' future business plans & budgets.

**ATTACHMENT 4F**

**SOUTHWEST POWER POOL REGIONAL ENTITY**

**STATEMENT OF ACTIVITIES AND ACHIEVEMENTS**



**Southwest Power Pool (SPP RE) Statement of its Activities, Achievements and Effectiveness  
in Carrying Out its Delegated Responsibilities**

*The Commission's regulations at 18 C.F.R. §39.3(c) require NERC to "submit an assessment of its performance three years from the date of certification by the Commission, and every five years thereafter." The initial performance assessment report is due to be filed with the Commission by July 20, 2009.*

*Consistent with the FERC regulations and the guidance in FERC's order as quoted above, the principal focus of the Regional Entity's document should be the Reliability Standards Development and Organization Registration and Compliance Monitoring and Enforcement (OC/CMEP) programs. (The Regional Entity should also include a discussion of its activities in the other four statutory program areas, but a less extensive discussion is needed.)*

**INTRODUCTION**

Southwest Power Pool, Inc. (SPP) is a Regional Transmission Organization, approved by the Federal Energy Regulatory Commission (FERC) to ensure reliable supplies of power, adequate transmission infrastructure, and competitive wholesale prices of electricity. In April, 2007, FERC approved the Delegation Agreement between NERC and SPP for the purpose of delegating to SPP certain responsibilities and authorities as a Regional Entity (RE) as defined by Section 215 of the Federal Power Act for the SPP region. These responsibilities and authorities include: i)Reliability standard development; ii)compliance enforcement; iii)Organization registration and certification; iv)Reliability readiness audit and improvement; v)Training and education and vi)Situational awareness and infrastructure security. SPP RE has registered entities in eight states across the central southwest United States.

The SPP RE is governed by three independent Regional Entity (RE) Trustees. The RE Trustees have autonomy over decisions in fund allocation and approval of the SPP RE Budget, as well as oversight of RE decisions on regional standards, compliance enforcement actions, and penalties.

The SPP RE is funded separately from other SPP, Inc. non-statutory activities by Load Serving Entities (LSEs), who are billed quarterly by NERC for their share of the RE and NERC budgets. Invoices are based on the LSE's annual Net Energy for Load calculations.

The SPP RE Budget provides funding for all programs included in the SPP RE Delegation Agreement. SPP RE Trustees have authority over the RE Budget and are responsible for completing an annual Business Plan and Budget, which is submitted by NERC (on SPP RE's behalf) to FERC for final approval every August. SPP RE employs dedicated RE staff to perform the Compliance and Enforcement program and Organization Registration and Certification. Other SPP RE programs are performed by shared SPP staff. Appropriate separation of staff functions and SPP Bylaws ensure that the SPP RE meets independence requirements as set forth in the April 2007 FERC Order.

## Review of Stakeholder Inputs

Stakeholder ratings and comments from the ERO three-year assessment survey support the notion that SPP has developed a fundamentally sound regional entity governance and staff. On the subject of governance and independence, the following inputs were received<sup>1</sup>:

- SPP RE scored 1.67 (27 respondents) indicating strong agreement that SPP RE is sufficiently independent of owners, operators, and users to effectively perform statutory duties with objectivity and integrity (Survey Question 63).
- SPP RE scored 1.63 (24 respondents) supporting the notion that SPP RE has sufficient rules to ensure its independence from bulk power system owners, operators, and users (Survey Question 65).
- Stakeholders also agree SPP RE is qualified, competent, well-prepared, and organized in the conduct of its statutory functions (score 1.47 on Question 59) and is timely and responsive to stakeholders on reliability matters (score 1.65 on Question 60).

### **I. Reliability Standards Development**

#### **A. Describe Regional Entity's activities and accomplishments in regional reliability standards development since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007.**

SPP RE facilitates the activities of the SPP Regional Standards Development Process, which was adopted as part of the SPP Regional Entity Delegation Agreement approved by FERC in 2007.

SPP RE is currently facilitating the development of one draft standard.

- PRC-006-SPP-01 – Regional Underfrequency Load Shedding

SPP RE and the SPP Markets and Operations Policy Committee (MOPC) have assigned the System Protection and Control Working Group (SPCWG) as the Standard Drafting Team (SDT) for the drafting of this standard. The SPCWG meets every two months, more often if necessary. The SDT meetings offer internet conferencing for those team members who are unable to attend in person. SPP RE shared employees facilitate all meetings and provide assistance in the standards development process. To promote wider awareness of and participation in the reliability standards process throughout the SPP region, SPP RE has updated the SPP RE website to provide information on standards being developed and the SPP Regional Entity Standards email exploder list. The site allows access to meeting notices of the SDT, drafts of proposed standards, and links to minutes of meetings.

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<sup>1</sup> Scores are based on a scale of 1 to 5, with 1 being fully agree, 3 being neutral, and 5 being fully disagree.

SPP RE staff also provide updates to the SPP RE Trustees at their regularly scheduled quarterly meetings. Since SPP RE utilizes existing working groups and subcommittees for SDTs, the current active standard being drafted by the SPCWG has been the subject of regular updates to its parent Committee, the MOPC at its regular quarterly meetings. SPP RE shared staff participates in the NERC Regional Reliability Standards Working Group and has contributed to the 2009-2011 NERC Work Plan and the proposed NERC Underfrequency Load Shedding standard.

Since January 2009, SPP RE SDT has developed a first draft for the UFLS standard. This draft is based on the key requirements as listed in NERC's Continent Wide Standard and SPP Criteria 7.3. SPP RE SDT released this draft standard for industry comments for 30 days in the first week of April. This group will continue to monitor the NERC SDT's progress on developing a continent-wide standard and will make necessary adjustments to the SPP RE standard accordingly. The SDT met in the last week of May to review comments received by SPP RE stakeholders on the first draft of UFLS standard. The group is in the process of responding to the comments and preparing second standard draft for comments. The actual date for posting for the second draft posting is yet to be determined at this time.

**B. Explain how the Regional Entity has the ability to develop regional standards and has a standards development process that provides for openness, due process and balancing of interests.**

The SPP RE Standards Development Process, as approved by NERC and FERC as Exhibit C to SPP's Delegation Agreement with NERC, provides for openness, due process, and balancing of interests. Participation in SPP RE's Standards Development Process is open to all parties with a direct and material interest in the SPP region bulk power system (BPS) with no undue financial barriers, and any such entity has the right to participate by expressing an opinion, having its opinion considered, voting on standards and having the right to appeal. Notices of all meetings of the SPP RE and all drafting teams are provided on the SPP RE website, at least seven days in advance; all meetings are open to the public.

The SPP RE Standards Development Process provides for a balance of interests as evidenced by the five market segments and a requirement of a vote of at least two-thirds of the segments for approval of any regional standard. No two segments can dominate, and no single segment can defeat any matter.

SPP RE's Standards Development Process provides fair due process by providing sufficient public notice of the intent to develop a standard and all proposed standards via posting such on the SPP RE Standards Tracking Site for public comments. The site allows all interested parties to submit comments during the commenting period. The Process also provides an appeals process.

During 2008, a revision to the Standards Development Process was made to incorporate a FERC directive in the Order for the SPP RE Delegation Agreement. In that Order, FERC requested SPP RE to clarify that each entity is allowed only one vote in the Registered Ballot Body (“RBB”), and that if an entity held business interests in more than one industry segment, it would be required to choose only one for purposes of voting on a proposed regional standard.

**C. State Regional Entity’s assessment of its own effectiveness in reliability standards development since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

SPP RE has implemented changes to its infrastructure to facilitate the SPP RE Standards Development Process. Since the Delegation Agreement was approved in April 2007, SPP RE has trained appropriate staff on the standards development process and has reviewed the process with members of the currently functioning SDT (the SPCWG). A Q&A sheet for the process, including eligibility requirements for voting and participation on the SDT, is posted on the SPP RE website. In October 2007, SPP RE hired full-time Counsel. This position oversees adherence to the requirements of the SPP RE Standards Development Process and has authority to direct SPP RE staff to meet those requirements. In addition, the SPP RE Trustees have been trained on the process and receive updates on the progress of the current proposed standard. SPP RE staff also updates RE Trustees on upcoming regional standards activities for resource planning purposes.

**D. State any proposals of Regional Entity to improve its effectiveness in reliability standards development**

SPP RE has a representative on the NERC Regional Reliability Standards Working Group. This group is a resource for regional entities to share their experiences with regional standards development. It also provides the regional entities with coordination with NERC to ensure consistency between regional and continent-wide standards. Communications from the SPP RE representative on the NERC working group with the SPP regional standards drafting team will aid in expediting the processing of regional standards through NERC after SPP RE approves a regional standard.

**II. Organization Registration and Compliance Monitoring and Enforcement Program**

**A. *Describe Regional Entity’s activities and accomplishments in OC/CMEP since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007.***

**Staffing**

**SPP RE Organizational Chart**

The organizational chart for the SPP RE as of June 18, 2009 is provided in Attachment 1:

On January 1, 2007, there were two full-time employees serving as the regional compliance monitoring and enforcement office, as well as the internal compliance monitor for the SPP RTO registered entity. Upon approval of the SPP Regional Delegation Agreement in April 2007, these two employees formed the nucleus of the independent SPP RE staff. The SPP RTO formed its own internal compliance group as a registered entity. During 2007, the SPP RE added one more staff member to the technical staff and Counsel, ending 2007 with a total staff of four.

In 2008, the SPP RE staff continued to expand by adding three technical staff each assigned areas of concentration such as compliance monitoring, mitigation and enforcement, and event analysis and investigations. In addition, an administrative assistant was added to the SPP RE staff. At the end of 2008, the SPP RE staff totaled eight full-time personnel consisting of six technical staff, one legal counsel and one administrative assistant. Among the credentials held by this staff includes three licensed attorneys, two registered professional engineers and three NERC certified operators.

The 2009 staffing plan called for the addition of three more positions to be filled in the first half of 2009. On March 16, 2009 an RE General Manager was hired. In May, 2009 one position was filled in the enforcement area by a licensed attorney and in June, 2009 the remaining position was filled to support entity registration and RE policy and procedure development. At each scheduled SPP RE Trustees meeting, a workload/staffing assessment is discussed consisting of historical activities, current workload and future initiatives.

The SPP RE Trustees have approved a 2010 Business Plan and Budget with 8 addition positions compared to the 2009 Business Plan and Budget to the RE direct staff to support compliance and enforcement activities. Two of these positions have been approved to be filled in the second half of 2009.

The SPP RE also utilizes independent contractors to augment the full-time staff during the performance of compliance audits, spot checks, event analysis, and investigations.

### Organization Registration

The SPP RE follows the NERC Statement of Compliance Registry Criteria and has adopted the NERC definition of the Bulk Electric System in assessing potential candidates for functional registration. Registration of entities began in 2006 with a general request to all members of SPP to begin registration activities and to assist in identifying other users, owners and operators of the Bulk Electric System in the SPP RE footprint that might be candidates for the compliance registry. The SPP RE staff made numerous presentations concerning registration at SPP meetings, membership meetings of cooperatives and municipalities, and at individual company events in order to expand the knowledge of the registration criteria.

In 2008, the SPP RE added the Interchange Authority to the list of registered functions contained in the Compliance Registry.

As of May 31, 2009 there were 115 registered entities performing 376 functions registered in the SPP RE footprint. The SPP RE has had one registration appeal filed by a registered entity. On June 15, 2009 the NERC Board of Trustees Compliance Committee affirmed the decision of SPP RE regarding the registration. The SPP RE monitors the registration appeals of entities in other regions to stay apprised of changes in registration policies. The SPP RE also works with individual entities concerning registration issues such as new interconnections, changes in ownership, and changing business relationships.

### Compliance Workshops

The SPP RE has held public compliance workshops to educate the membership and other interested parties to comply with SPP criteria since 2000 and after 2007 to comply with NERC reliability standards. In recent years, the SPP RE has expanded the number of workshops to two per year, open to the public but targeted to registered entities, usually one in the spring and one in the fall.

Each workshop lasts approximately two days. Attendance ranged from 115 to 140 participants per workshop in 2007-2009. Each workshop agenda includes a variety of speakers, panel discussions, and interactive Q & A sessions. Participants are encouraged to provide feedback to the workshop coordinator concerning the current workshop and ideas for future workshops.

All of the workshops include some standard items such as a NERC speaker, recent results from the compliance program, registration issues, compliance data management system updates and compliance program schedules. Other topics presented during the 2007 - 2009 workshops included:

- Vegetation Management Standard Activities
- Relay Maintenance Programs
- CIP Standards Implementation
- Audit Preparation Panels
- Internal Compliance Program Attributes
- Annual Compliance Program Rollout

The SPP RE and the SPP Critical Infrastructure Protection Working Group have sponsored three workshops dedicated to CIP reliability standards. The attendance at each workshop has been approximately 85+ participants and featured speakers from the NERC staff, SPP RTO staff, SPP RE staff, industry experts, and other stakeholders.

### Compliance Audits

All registered entities in the SPP RE footprint are subject to compliance audits. Reliability Coordinators, Balancing Authorities, and Transmission Operators are scheduled for audits on a 3-year rotation while all other registered entities are scheduled on a 6-year rotation. The audits for entities on the 3-year rotation program are all conducted as on-site audits. The audits for entities on the 6-year rotation program are conducted either as on-site audits at the registered entity's offices or as off-site audits conducted at the SPP RE's office in Little Rock, Arkansas. The SPP RE also participates with other regional entity staffs on certain audits of multi-regional registered entities.

### Compliance Audit Statistics

	<u>2007</u>	<u>2008</u>	<u>2009</u> <u>(scheduled)</u>
<u>On Site Audits</u>	<u>6</u>	<u>7</u>	<u>15</u>
<u>Off Site Audits</u>	<u>0</u>	<u>11</u>	<u>23</u>

The SPP RE publishes an audit schedule in November of each year with specific dates for the subsequent year, including a proposed list of the entities scheduled for the full 6-year audit rotation. This list is published on the public SPP RE website.

### Self Certification

The SPP RE Self Certification program is performed on an annual basis for each program year with an open certification period beginning in the fourth quarter of each year and closing in mid-January of the following year. All of the self-certification activities are conducted through the SPP RE Compliance Data Management System (CDMS). Each registered entity must complete the annual self-certification forms, provide an executed corporate signature page, and submit a completed internal compliance program questionnaire. The CDMS program alerts the SPP RE staff when submittals are made by the registered entities including notices on non-compliance certifications.

The self-certification activity for the 2007 program year yielded 42 notices of non-compliance from four entities. These entities were relatively new registrants in the compliance registry, with three of the four having registration dates after June 18, 2007.

Self-certification for the 2008 program year closed on January 18, 2009. No new compliance violations have been reported by the entities that have completed the certification.

In addition to the annual self certification, the SPP RE conducted a CIP-002 through CIP-009 self certification for the periods ending in June 2007, June 2008 and December 2008. The SPP RE currently has scheduled additional CIP standards self-certifications for the periods ending June 2009 and December 2009.

Compliance Program Statistics

As of May 31, 2009

<b>Violations Processed</b>			Comments
	Pre-June 18, 2007	157	153 Self-reported; 4 from pre-June 18 <sup>th</sup> audits
	Post-June 18, 2007	78	26 Self-reported
			9 Compliance Audit
			42 Self-certification
			1 Periodic Data Submittal
<b>Mitigation Plans Processed</b>			
	Pre-June 18, 2007	157	157 Reported complete
	Post-June 18, 2007	67	67 Accepted by SPP RE
			36 Reported complete; 36 have been verified as completed by SPP RE
			31 In progress

The SPP RE received and processed one complaint from June 2007 to May 31, 2009.

*B. Describe how the Regional Entity has the ability to enforce reliability standards and to provide for an adequate level of bulk power system reliability in its Region.*



The SPP RE has the authority to monitor and enforce compliance with the NERC Reliability Standards through a FERC approved Delegation Agreement with NERC. The SPP RE has adopted the NERC Compliance Monitoring and Enforcement Program (CMEP) without exceptions. In addition, the SPP RE follows the NERC Rules of Procedure.

The SPP RE General Manager, compliance monitoring and enforcement staff and the RE Counsel are independent of all other departments of SPP, Inc. The SPP RE Trustees have delegated certain levels of enforcement actions to the full-time staff but have retained approval authority over major enforcement actions and proposed settlements of compliance violations.

The SPP RE also utilizes FERC Orders, FERC staff guidance, NERC Process Bulletins and NERC staff guidance to form its authority and ability to monitor and enforce the NERC Reliability Standards.

Since joining SPP RE in March 2009, the RE General Manager has conducted a resource assessment resulting in a proposal for 8 additional direct positions in the 2010 SPP RE Business Plan and Budget compared to the 2009 Business Plan and Budget.

*C. Describe how the Regional Entity has fair and impartial procedures for enforcing reliability standards.*

All SPP RE employees are required to have a current SPP Code of Conduct on file with the SPP Human Resources department. In addition, all of the SPP RE employees must be current on all SPP Policies and Procedures relating to SPP employees. All SPP RE employees are expected to be free of conflicts of interest that could impede their ability to make decisions that are fair and independent of any other user, owner or operator of the BES.

In 2007, the SPP RE staff moved into a separate area of the SPP offices with access controlled by an electronic key lock system. In May, 2009 SPP RE direct staff moved out of the SPP, Inc general office space to a different office building where SPP RE direct staff are the sole SPP employees on one floor. The office building houses SPP engineering staff on a different floor. Access to the RE offices has been restricted to the SPP RE direct staff and the Security Department at SPP. Other SPP staff and stakeholders must request access to the SPP RE offices and are escorted at all times while in the RE office area. This separation has allowed for more open discussion among the compliance staff and improved decision making by the compliance staff.

The SPP RE allows all audited registered entities an opportunity to accept or object to any member of a proposed audit team. A short biography of each audit team member is attached to the original audit notice to the registered entity to aid the registered entity in identifying conflicts from prior employment or other activities.

In addition to avoiding conflicts of interest, all violation assessments and enforcement actions are performed as a team or collaborative effort. Findings from compliance audits,

spot checks, complaints and investigations are identified by the compliance team assigned to the activity (generally 3 or more members) before being presented to the SPP RE management staff for approval. Findings from self-certification, self-reports, periodic monitoring, and exception reporting are reviewed by the SPP RE staff assigned to the activity, other SPP RE staff members, and the registered entity that submitted the violation notice before being presented to the SPP RE management staff for approval. Enforcement actions are also processed using a team approach generally involving the Lead Engineer assigned to the enforcement group, the compliance monitoring staff that discovered the violation, the Executive Director and the RE Counsel. The use of this type of team approach helps educate all of the SPP RE staff involved in compliance monitoring and enforcement, draws on each staff member's experience and expertise, and reduces the number of violations that are later dismissed.

The SPP RE staff also participates in numerous working groups with other regional entities and NERC personnel. The goal is to compare and contrast compliance, enforcement and event analysis activities in order to provide a consistent product from the regional entity standpoint. These groups are particularly helpful during events or violations of "first impression" in the SPP RE, allowing the SPP RE staff to draw on the experiences of other regional and NERC personnel.

As discussed earlier, the SPP RE is affiliated with the SPP RTO, which is a registered entity in the SPP RE and SERC regions. In order to avoid the appearance of any conflicts in performing compliance audits for the SPP RTO, NERC is planning to take the lead in performing the compliance and enforcement activities for all of the functions for which the SPP RTO is registered.

*D. State Regional Entity's assessment of its own effectiveness in OC/CMEP since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.*

The effectiveness of the SPP RE in administering the Organization Registration/Certification and annual CMEP programs is steadily increasing. The primary contributors to this improvement include: additional dedicated SPP RE staff, allowing SPP RE to process the number of violations occurring at any time; the experience level of the staff resulting in increased productivity and the ability to quickly respond to changes in the CMEP program and its requirements; and the growing experience of the registered entities in performing internal compliance activities and processing the data flow required by the SPP RE.

On January 1, 2007, there were approximately 35 entities participating in the pre-enforceable compliance program. Most of these entities had been participating in the pre-enforceable program since 1999 and were familiar with the SPP staff, NERC, the existing reliability standards and the tools used by the SPP staff for reporting compliance activities. By June 2007 when the standards became mandatory, approximately 120

entities had registered in the SPP RE footprint, a 250% increase in registered entities. Accompanying this large increase in participating entities was a wave of pre-June 18<sup>th</sup> self-reports that primarily came from these new entities (over 90% of the pre-June 18<sup>th</sup> self-reports came from new registrants). This wave of self-reports overloaded the initial SPP RE staff and every aspect of the compliance process. In addition to the sheer number of violations, some of the reports were incomplete and inaccurate requiring extra processing time. However, with the collaboration with the other regional entities' staff and guidance from the NERC staff, these violations were moved through the system and for the most part, were reported complete and verified by the summer of 2008. While the number of reported violations diminished, it became quite evident that additional dedicated staff was required to perform the delegated compliance monitoring, enforcement activities, and comprehensive mitigation plan monitoring activities.

The second major challenge occurred at the end of 2007 when the registered entities were required to perform their first annual self-certification utilizing the SPP RE CDMS program tool. Portions of both 2007 compliance workshops were dedicated to the CDMS program tool and the interfaces with the registered entities. First time users still struggled with the CDMS program tool as well as the concept of producing a complete self-certification for all of the requirements assigned to each functional registration. In addition, the SPP RE utilized a new release of the CDMS program tool that proved to be inadequate under the stress of so many new users. The CDMS problems required many man hours of the SPP RE staff time to respond to user's calls for assistance and led the SPP RE to extend the final due date for the self-certifications by approximately 40 days. The SPP RE staff and Midwest Reliability Organization (MRO) staff worked with the developers to make improvements to the CDMS program tool and launched a vastly improved version in April 2008. This new version has corrected the problems and even received accolades from many of the users. Importantly, it provides the SPP RE staff with improved reporting and monitoring capabilities.

*E. State any proposals of Regional Entity to improve its effectiveness in OC/CMEP.*

The SPP RE staff has an average of approximately 18 years experience in the electric utility industry. However, with the exception of the Executive Director and the Lead Engineer, the average tenure in any compliance monitoring and enforcement program is less than 1½ years (the Executive Director and Lead Engineer have an average of 8 years of tenure in the voluntary and mandatory NERC Compliance Program). The SPP RE staff continues its professional development through training courses offered by NERC, private training companies, and FERC sponsored conferences. The SPP RE staff also participates on numerous regional entity working groups that are designed to improve consistency and effectiveness of the regional work product. As discussed earlier the RE General Manager has conducted a resource assessment which resulting in a proposal for 8 additional direct positions in the 2010 SPP RE Business Plan and Budget compared to the 2009 Business Plan and Budget.

During the 3<sup>rd</sup> quarter of 2008, the SPP RE conducted a survey of registered entities to gather feedback concerning issues including regional reliability standards, readiness evaluations, compliance program issues, training, and suggestions for improvements. Approximately 75 responses were received. The SPP RE staff is reviewing the responses and suggestions and will implement the suggestions for improvement, as appropriate.

In addition to the public workshops discussed earlier, the SPP RE has assisted the SPP RTO in launching the Compliance Users Forum at which registered entities of the same functions can meet to discuss issues and share ideas for best practices. After two preliminary sessions held following the SPP RE compliance workshops, the first stand alone meeting was held in February 2009 in Little Rock, Arkansas.

Before year-end 2009, the SPP RE also plans to expand its outreach efforts by launching a quarterly newsletter to provide another source of information to the registered entities in the SPP RE footprint.

### **III. Other Program Areas**

#### **A. Reliability Readiness Evaluation and Improvement Program**

##### **1. Describe Regional Entity's activities and accomplishments in Reliability Readiness Evaluation and Improvement since January 1, 2007, including discussion of improvements in this area.**

The SPP RE staff managed all aspects of the NERC Readiness Evaluation and Improvement Program in the SPP RE footprint. These activities included the scheduling of reviews, soliciting regional volunteers, acting as regional co-lead during the evaluation and finally monitoring the recommendations from each evaluation. In addition, some members of the SPP RE staff participated as out-of-region volunteers for evaluations of Reliability Coordinators in other regions.

From 2004 through 2008, all Reliability Coordinators, Balancing Authorities, and Transmission Operators registered in the SPP RE footprint participated in at least one, and for approximately half of the entities a second, Readiness Evaluation before the program began phasing out near the end of 2008. The SPP RE hosted five Readiness Evaluations in 2007 and three Readiness Evaluations in 2008.

The SPP RE benefits from an experienced pool of volunteers who not only served the Readiness Evaluation Program in the SPP RE footprint, but also provided a pool of volunteers for the out-of-region slots. This pool of volunteers also provided valuable insight to their own companies that were scheduled for upcoming evaluations as well as the opportunity to share knowledge and experiences with other industry participants.

- 2. State Regional Entity's assessment of its own effectiveness in Reliability Readiness Evaluation and Improvement since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

As discussed above, the SPP RE staff performed the role of the regional co-lead for almost every Readiness Evaluation from 2004 until early 2008. This role brought consistency and experience to each evaluation in the SPP RE footprint. However, in late 2007 and early 2008, the NERC Compliance and Certification Committee of stakeholders made a recommendation to NERC that compliance personnel from the regional staffs not participate as team members on future Readiness Evaluations. The entire dedicated SPP RE staff is involved in the Compliance Monitoring and Enforcement Program, effectively eliminating the existing RE staff from participating in future Readiness Evaluations. The robust pool of volunteers developed over the previous four years allowed a smooth transition to an all volunteer SPP contingent for the scheduled evaluations in late 2008. However, only three evaluations were performed of the original six scheduled due to NERC's proposed phase out of the program.

The SPP RE continues to monitor the progress of the recommendations from each evaluation report and provides quarterly updates to NERC to support its continuing efforts at the national level. The Readiness Program was phased out in the first quarter of 2009, but the SPP RE has allocated manpower to track all open recommendations to conclusion and continue to update the NERC staff as appropriate.

- 3. [Discussion of proposed improvements not needed, since this program is being phased on in the first quarter of 2009.]**

NO RESPONSE REQUIRED

## **B. Training, Education and Operator Certification**

- 1. *Describe Regional Entity's activities and accomplishments in Training, Education and Operator Certification since January 1, 2007, including discussion of improvements in this area.***

NERC requires personnel responsible for the operation of the electrical grid to obtain 32 hours of emergency operations training annually. In addition, to maintain Operator certification required by NERC, Operators must obtain up to 200 hours of training over three years which includes simulation training. It was critical that SPP training staff develop training elements to provide knowledge and operating practice in support of the emergency operating plans for the SPP region, with SPP registered entities, and between regions.

To accomplish this, SPP training staff developed a Regional Emergency Operations curriculum in early 2007. This curriculum included a variety of training topics, delivery styles, and environments all designed to address different training needs throughout the SPP region.

SPP training staff created a catalog of remotely delivered internet conferences on Transmission Loading Relief, Congestion Management, Voltage Control, System Stability, IROL, SPP Reserve Sharing System, and SPP Procedures. SPP training staff developed a total of seven internet conference topics delivered in 2007 and 2008, with multiple deliveries of each.

In addition to the internet conferences, SPP training staff developed an in-person emergency operations class. This class is designed to utilize simulated scenarios facilitated through a critical decision making process. Through the use of this process, small groups in this class work together to resolve operational issues such as flow limit violation and voltage control. The use of tools such as the SPP Dispatcher Training Simulator (DTS) allows the participants to practice problem solving in an operational environment.

SPP training staff also enhanced the restoration drills to allow registered entity operators to practice simulated restoration exercises and implement their own restoration plans in conjunction with other registered entities throughout their sub-region and the SPP region as a whole. The restoration drills provide an excellent opportunity for registered entity operators to work with each other and SPP operations personnel to simulate the restoration of the transmission systems utilizing their respective restoration plans. There are eight sub-regional and two regional drills annually, allowing ample opportunity for operators to hone their skills in restoration principles. These drills are offered remotely, via Virtual Private Network connections, allowing a wider mix of operations personnel, without the burden of travel. Registered entity operators are remotely connected to the SPP DTS and participate in a group comprised of other registered entity companies, along with SPP operations personnel. Together they restore the registered entity company systems as well as a significant portion of the SPP region during each drill.

SPP training staff hosts System Operations Conferences. These conferences were offered twice in 2007 and 2008. With a wide variety of operations-related topics, the participants interact with their peers throughout the 3-day conference. In 2007 SPP training staff added critical decision making exercises to the existing knowledge-based offerings typical of a conference setting. These exercises offer an excellent opportunity for operators to share ideas and experience, compare different operations perspectives, and add to their knowledge base with specific regard to a large array of operational topics.

In each of these delivery settings, SPP training staff has continued to make use of different types of training. These offerings utilize knowledge-based lectures to broaden the platform of general knowledge for registered entity operations personnel. SPP training staff uses critical decision making exercises and problem-centered learning exercises to allow operators to interact and work together in resolving operational issues. Performance-based assessments, along with traditional quizzes and exams allow a more thorough evaluation of

the learning process throughout the training catalog and a deeper look at the competency level of SPP registered entity operations personnel.

Finally, in 2008 SPP training staff provided a three-part Train-the-Trainer series designed to promote a wide range of training deliverables along with the necessary components required of quality training programs. The series is designed to promote the 360-degree (knowledge, skills and attitudes) training perspective that SPP is utilizing within its own training department. The Train-the-Trainer sessions provide trainers within the SPP region the opportunity to explore different training methods and delivery styles, from performance-based assessments to critical decision making and problem-centered learning exercises.

***2. State Regional Entity's assessment of its own effectiveness in Training, Education and Operator Certification since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.***

During 2007, SPP training staff delivered 24 internet conferences, with an average of nearly ten participants per conference. A total of 392 Continuing Education Hours (CEH) were awarded from these sessions. In 2008, the participation improved to an average of 22 participants providing a total of 726 CEH.

The Regional Emergency Operations Class was delivered five times in 2007 with 780 CEH awarded, averaging eight participants per session. In 2008, there were six sessions, averaging more than 11 participants per session and awarding more than 1,400 CEH.

Nearly 5,000 CEH were awarded during the ten restoration drills delivered in 2007. Average attendance in the sub-regional drills and regional drills was 28 and 69, respectively. During 2008, by comparison, approximately 7,550 CEH were awarded. Average participation rose to 30 for the sub-regional drills and 98 for the regional drills during 2008.

The two 2007 System Operations Conferences (SOC) included 110 participants and nearly 2,600 CEH awarded. In 2008, 103 participants received a total of 2,440 CEH. The number of participants dropped in 2008 conferences due to a participant limit enforced primarily due to facility constraints and the move to the more interactive, facilitation-driven exercise format.

From 2007 to 2008, SPP training staff increased the number of CEH awarded to operators at registered entity companies by approximately 35%.

From January 1, 2009 to May 31, 2009 the SPP training staff delivered four Regional Emergency Operations classroom training sessions, seven internet conferences, four sub-regional restoration drills, one regional restoration drill, and one Train-the-Trainer session. The REOPs classroom enrollment is up from an average of 11 in 2008 to 19 for the deliveries from January 1, 2009 to May 31, 2009. The internet conferences enrollment is up from an average of 22 in 2008 to 33 from January 1, 2009 to May 31, 2009. The sub-regional restoration drill enrollment is up from an average of 30 in 2008 to 42 from January 1, 2009 to May 31, 2009. The average regional restoration drill enrollment was 98 in 2008 compared to

86 in Spring 2009. There was no significant difference in enrollment between the 2008 Train-the-Trainer compared to the delivery in February 2009. A total of 7,528 CEH were awarded from January 1, 2009 to May 31, 2009.

The information above reflects SPP's commitment to improve training and increase the number of operators participating in training. Below are selected relevant comments from the semi-annual regional training survey that SPP training staff has worked to respond to:

*More System Operator Conferences. We can't get enough people free to attend them at only two per year. How about every quarter?*

***SPP training staff increased the number of conferences from two to three.***

*More venues for the regional training sessions.....bring the training to the customers rather than them come to you.*

***Each conference is held in a different geographic location including (for 2009) Missouri, Arkansas and Louisiana.***

*I attended the Regional "Black Start" drill (3 days) in Dec and have taken various "Net Conference" classes. Each time we go through the drills and classes, it goes a little better. I think you're on the right track. This is an evolving process for us all. We learn from our mistakes as well as the things we do right.*

***SPP training staff continues to be an industry leader in the design and facilitation of our restoration drills.***

*Please try to keep the SOC from being a NERC type training class only. The table top exercises are good as they promote group input and creative thinking.*

***SPP training staff designed its System Operations Conference ("SOC") to address real world scenarios and support critical decision making and situational awareness through problem-based scenarios.***



**3. State any proposals of Regional Entity to improve its effectiveness in Training, Education and Operator Certification.**

Prior to the hiring of the SPP RE General Manager in March 2009, the SPP Training Department reported to an SPP executive who also acted as the SPP RE executive. Based on a review by the new RE General Manager and in consultation with NERC staff, the 2010 SPP RE Business Plan and Budget will include only training related to statutory functions such as the compliance workshops. This is consistent with the practices in the other Regional Entities. The remaining training which represents essentially the entirety of the Training Department will be budgeted in the SPP, Inc. budget.

During the period since April 2007, SPP has made significant progress in making the training activities much more interactive, utilizing critical decision making as well as a problem-centered learning approach to training. These exercises allow operators an opportunity to train in an intense, interactive environment more closely resembling the environment in which they work. Through the System Operations Conferences, the Regional Emergency Operations classes, and the System Restoration Drills, the operators within the SPP region can share invaluable experience with each other while sharpening their own skills in risk management and critical thinking. SPP training staff intends to migrate the net conferences to a more interactive delivery as well, by using breakout sessions to facilitate more group interaction.

SPP training staff has developed more training activities that can be delivered remotely, including the net conferences and the restoration drills. This allows registered entity operators the opportunity to participate in quality training without the added burden of travel. Through these remote training activities, SPP Training has designed environments which include group activities. These activities help develop idea sharing and the advantage of perspective from different parties, all with the increased ease of scheduling and participation. The Operations Training Working Group (OTWG), which is comprised primarily of training personnel at registered entities within the SPP RE footprint, expressed an interest in SPP trainings staff developing not only remotely delivered training, but training which also included interaction among its operators at registered entities. The training catalog developed by SPP training staff does both.

Based on semi-annual regional training surveys and with feedback from the OTWG, SPP training staff will continue to manage its regional training catalog to meet the varied needs within the region. The SPP Training staff strives to offer multiple deliveries of all training activities to help reach as many registered entity operators as possible.

Looking at 2009 and beyond, SPP training staff will:

- a) offer an additional System Operations Conference to allow more personnel to take advantage of this training opportunity. SPP training staff also plans to conduct these conferences in three different geographic areas within the SPP RE footprint (Little Rock, AR; Springfield, MO; and Lafayette, LA) to better facilitate registered entity participation while lessening the burden of travel.
- b) include training on Human Factors Performance to address continued concerns regarding operations personnel and situational awareness, as well as increase the use of performance-based training, such as critical decision making exercises and problem-centered learning.

- c) update its net conference offerings to include a course on SPP Criteria and NERC Reliability Standards, specifically aimed at those policies and procedures addressing emergency operations concerns. These two new net conference offerings will replace the SPP Procedures and the Interconnection Reliability Operating Limit (IROL) net conference in 2009, based on feedback from operators completing the survey, as well as feedback from the OTWG members.
- d) continue its Train-the-Trainer sessions to help trainers at registered entities develop their own training programs in light of the potential impact of NERC PER-005 (System Personnel Training Standard).
- e) offer training on the NERC PER-005 System Personnel Training Standard to help inform and prepare registered entity training personnel on the potential impacts of this standard.
- f) migrate regional emergency operations net conference training sessions to a self-study format.
- g) continue to explore ways to increase availability of the DTS to registered entities.
- h) continue to provide enhancements to the DTS in order to bring the simulator functionality closer to real world applications.
- i) continue to seek out strategic partnerships that will allow SPP to provide registered entity operations personnel with high quality training and performance support.

### **C. Reliability Assessment and Performance Analysis Program**

#### **1. Describe Regional Entity's activities and accomplishments in Reliability Assessment and Performance Analysis since January 1, 2007, including discussion of improvements in this area.**

SPP RE through SPP RTO staff has been performing the Reliability Assessment and Performance analysis function since January 1, 2007. Each calendar year, SPP staff has actively participated in the following assessments that were coordinated through NERC's Reliability Assessment Subcommittee (RAS):

- Summer Assessment (2007, 2008 and 2009)
- Winter Assessment (2007 and 2008)
- Long Term Reliability Assessment (10 year outlook with emerging issues)

SPP staff has also developed power flow models and conducted various reliability assessments to meet NERC Transmission Planning Standard (TPL 001 through 004) requirements

In addition, SPP staff has been working with neighboring regions to conduct an inter-regional assessment to meet the NERC TPL-005 requirement. Since January 1, 2007 SPP staff has conducted summer and winter inter-regional assessments for year 2007 and 2008. For 2009, SPP RE is in a process of conducting 2009 and 2014 summer inter-regional studies. The results of the 2009 summer inter-regional study were available in May 2009.

**2. State Regional Entity's assessment of its own effectiveness in Reliability Assessment and Performance Analysis since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

SPP RE staff has been closely monitoring the reliability assessments and performance analysis while providing independent review from time to time. In December 2008 an RE direct staff person was added to participate in the reliability assessment process along with the shared resources and an SPP RE direct staff person has been appointed to NERC's RAS team to actively participate in all reliability assessments going forward.

SPP RE stakeholder comments on the ERO assessment survey lend support to the notion that SPP RE is meeting expectations in this area:

- Rating of 2.29 on Question 32 by 17 respondents indicating SPP RE is effective in performing accurate and independent assessment of future reliability and adequacy.
- Rating of 1.78 on Question 34 by 23 respondents indicating SPP RE effectively communicates reliability assessment results.

**3. State any proposals of Regional Entity to improve its effectiveness in Reliability Assessment and Performance Analysis.**

SPP RE, along with other NERC Regional Entities through the NERC RAS group, has recommended a "Scenario Assessment" be performed in 2009 for NERC's Long Term Reliability Assessment (LTRA). This assessment will allow each region to develop a scenario in addition to their reference cases. SPP RE, along with other regions, including Midwest Reliability Organization, Reliability First Corporation and Northeast Power Coordinating Council, have chosen "Wind Penetration" as a possible scenario. The reliability impact of this scenario will be discussed in NERC's 2009 LTRA report.

**D. Situational Awareness and Infrastructure Security Program**

**1. Describe Regional Entity's activities and accomplishments in Situational Awareness and Infrastructure Security since January 1, 2007, including discussion of improvements in this area.**

The SPP RE provided active participation in the area of critical infrastructure protection by supporting NERC Critical Infrastructure Protection Committee (CIPC)

meetings. Three SPP RE representatives attended CIPC meetings, representing the physical, cyber, and operations expertise areas. These representatives provided insight and support of these critical CIPC functions, and provided an informational conduit between NERC and SPP registered entities.

In addition to CIPC representation, the SPP RE also supported four quarterly Critical Infrastructure Protection Working Group (CIPWG) meetings. These meetings brought together SPP RE staff and registered entity representatives to discuss the NERC CIP Standards (CIP-002 through CIP-009). Specifically, standards revision activities, ongoing implementation recommendations, and updated cyber and physical security threats were discussed at length during these meetings. External agencies, such as the Department of Homeland Security and the Federal Bureau of Investigation, were invited to educate registered entity representatives on the latest emerging threats to critical infrastructure.

SPP RE also conducted CIP Compliance “How To” workshops in 2007 and 2008 as well as included CIP compliance in the periodic Regional Compliance Workshops. Another CIP workshop was held in May 2009.

As the reliability coordinator for the region SPP participates in daily Reliability Coordinator (RC) morning calls with neighboring RCs to review outages, weather, special operating situations and any relevant events that impact the reliability of the bulk power system. SPP also provides NERC and FERC with a Daily Report of the SPP Region. This report includes information about outages, current congestion, and other pertinent system information for the operating day.

**2. State Regional Entity’s assessment of its own effectiveness in Situational Awareness and Infrastructure Security since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

In the stakeholder survey, feedback was positive regarding SPP RE’s role in support of CIP:

- Rating of 1.61 by 18 respondents to Question 45 regarding SPP RE’s role as a leader and facilitator in the CIP area.

SPP RE continues to improve its efforts related to Situational Awareness. On April 6, 2009, SPP RE was also able to add a full-time Director of Critical Infrastructure Protection. SPP RE enhanced stakeholder understanding by initiating CIP workshops.

**3. State any proposals of Regional Entity to improve its effectiveness in Situational Awareness and Infrastructure Security.**

Upcoming critical infrastructure protection activities include ongoing support of CIPC and the SPP CIPWG, and a CIP Standards compliance workshop for SPP registered entity companies beginning in May 2009. This workshop provided additional guidance on the evolving CIP Standards, emerging technologies, procedures, and best practices for achieving CIP compliance.

SPP RE is also working with NERC and the other regional entities to determine more ways to provide situational awareness information to NERC and FERC to satisfy the electric reliability legislative requirements.

## **E. Budgeting**

### **1. Describe Regional Entity's activities and accomplishments in the development and submission of its annual business plan and budget, beginning with the 2007 business plan and budget.**

The SPP RE successfully obtained NERC and FERC approval of both its 2007 and 2008 business plans and budgets and conditional approval of its 2009 business plan and budget. Similarly to the other regional entities and NERC, SPP RE has improved its budgeting estimates and processes since its submission of its 2007 business plan, primarily because the expectations of regional entities have become clearer over the past two years, and SPP RE has gained experience in performing regional entity duties.

Below are a few of the processes and systems that SPP has put in place since the 2007 business plan was completed and the delegation agreement was formally approved by FERC. These processes and systems have significantly improved the ability of SPP RE to budget and forecast:

- SPP established a methodology for charging direct costs and allocating indirect costs to SPP RE. This methodology consists of charging all directly identifiable costs such as salary, benefits and payroll taxes of each SPP RE and SPP shared staff member performing statutory functions to the statutory program, based on the number of hours worked performing those functions. The overhead/indirect cost rate per hour is calculated annually based on total SPP overhead costs. The overhead/indirect costs are allocated to SPP RE by multiplying the hourly overhead/indirect cost rate times the number of paid hours for SPP RE and recorded hours for SPP shared staff members to SPP RE statutory direct programs. Unlike the direct costs, which are specific to the staff member, the hourly overhead/indirect rate used for the indirect cost allocation is the same for all staff. This methodology is further described in SPP's Delegation Agreement and in previous filings with the Commission.

- Beginning in January 2008, SPP initiated a company wide time-tracking system used to record time devoted to performing statutory functions. The system is a third party hosted solution which is accessed through the internet. This system allows SPP management to review and approve timesheets submitted by each SPP user. Coupled with the cost allocation methodology described above, this timetracking system has allowed SPP to “carve out” staffing costs associated with the regional entity statutory functions.
- Beginning in first quarter 2008, SPP initiated a new expense tracking tool. The new tool allows SPP to more easily identify expenditures associated with the regional entity statutory functions.
- In 2009, the new RE General Manager conducted a review of the costs included in the indirect expense rate and identified certain adjustments which will be made to the rate in 2009 and beyond.

**2. State Regional Entity’s assessment of its own effectiveness in developing its business plans and budgets and in the submission its business plans and budgets in a consistent manner with NERC and the other Regional Entities.**

The SPP RE’s effectiveness in developing and submitting business plans and budgets in a consistent manner with NERC and the other regional entities has steadily improved with each filing. For all of its submitted business plans and budgets, SPP RE has followed NERC guidance and templates, attended all scheduled budgeting meetings with NERC and the other regional entities, and had numerous discussions with NERC and the other regional entities regarding the preparation of the business plans and budgets. NERC has improved its processes and templates and hosted more discussions with the regional entities to try to improve the consistency of the business plans and budgets. Overall, SPP RE’s business plan and budget was consistent with NERC guidance. Due to the varying structures of the regional entities, there may be differences in how each organization prepares its respective operating budget but, particularly in light of the October 16, 2008 FERC Order on the 2009 business plans and budgets, the regional entities will continue to discuss and harmonize any remaining differences with NERC and each other.

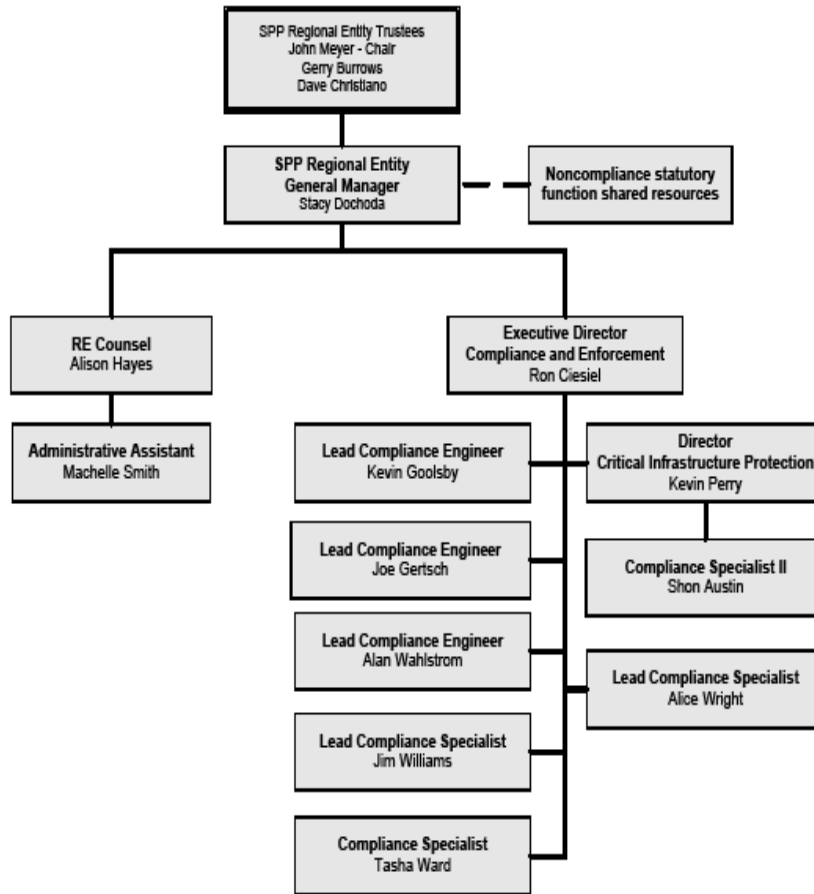
**3. State any proposals of the Regional Entity to improve its effectiveness in submitting effective, adequate and consistent business plans and budgets.**

- SPP RE suggests that NERC and the regional entities use generally accepted accounting principles to increase the level of consistency in the business plans and budgets. This would require NERC and each regional entity to prepare an operating budget and a separate capital expenditures budget.

SPP RE believes that NERC and the regional entities need to standardize language and expectations regarding the acceptable components of indirect costs so that the regions can consistently budget certain expenses as either indirect (overhead) or direct (functional). With two full years of experience, and in accordance with FERC guidance, NERC and the regional entities should be able to implement a uniform expense allocation that will enhance consistency among the regional entities and NERC.



# 2009 Organizational Chart



Last Updated: 06/18/09



**ATTACHMENT 4G**

**TEXAS REGIONAL ENTITY**

**STATEMENT OF ACTIVITIES AND ACHIEVEMENTS**



**Texas Regional Entity Statement of Activities and  
Accomplishments in Carrying Out its  
Delegated Responsibilities for the Period  
January 1, 2007 – May 31, 2009**

**June 1, 2009**

## **Introduction**

Pursuant to the regulations of the Federal Energy Regulatory Commission (FERC), 18 C.F.R. §39.3(c), the North American Electric Reliability Corporation (NERC) is required to submit an assessment of its performance three years from the date of NERC's certification as the Electric Reliability Organization ("ERO") for the United States of America. NERC must include in its self-assessment an assessment of the effectiveness of each Regional Entity. As part of the process of developing the Regional Entities' assessments, NERC has requested that each Regional Entity provide a Statement of Activities and Achievements for distribution and public comment.

Public comment on the first draft of NERC and the Regional Entities' Statement of Activities and Achievements to October 31, 2008 was solicited on January 14, 2009 via a questionnaire posted on the NERC Web site. Texas Regional Entity (Texas RE) reviewed the data and comments received in response to the questionnaire. This version of Texas RE's Statement of Activities and Achievements has been updated to include discussion on the areas for improvement identified by the first round of stakeholder feedback.

## **Background**

Texas RE is a functionally independent division of Electric Reliability Council of Texas, Inc (ERCOT ISO) and is the Regional Entity for the ERCOT region, through a delegation agreement with NERC. As the independent system operator (ISO) for the region, ERCOT ISO manages the flow of electric power to 21 million Texas customers – representing 85 percent of the state's electric load and 75 percent of the Texas land area. ERCOT ISO schedules power on an electric grid that connects 38,000 miles of transmission lines and more than 550 generation units. ERCOT ISO also manages financial settlement for the competitive wholesale bulk-power market and administers customer switching for 6 million Texans in competitive choice areas. ERCOT is a membership-based 501(c)(4) nonprofit corporation, governed by a board of directors and subject to oversight by the Public Utility Commission of Texas and the Texas Legislature. ERCOT's members include consumers, cooperatives, independent generators, independent power marketers, retail electric providers, investor-owned electric utilities (transmission and distribution providers), and municipal-owned electric utilities.

Formerly ERCOT Compliance, Texas RE was created and began acting as a functionally independent division of ERCOT ISO on May 18, 2007, when Texas RE's approved delegation agreement with NERC was filed with the FERC. As mandated by its delegation agreement, Texas RE performs the regional entity functions described in the Energy Policy Act of 2005 for the ERCOT region. Texas RE is authorized by NERC to develop, monitor, assess, and enforce compliance with NERC reliability standards within the geographic boundaries of the ERCOT region.

### **I. Reliability Standards Development**

#### **A. Describe Regional Entity's activities and accomplishments in regional reliability standards development since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007.**

Texas RE facilitates the activities of the Reliability Standards Committee (RSC), which was formed in December 2007, as well as the implementation of the Texas RE Regional Reliability Standards Development Process, as described and approved in Texas RE's May 2007 delegation agreement.

Texas RE has facilitated the development of seven draft standards/procedural changes:

- SAR-001-TRE-02 – Provision for the ERCOT ISO to Participate and Have a Vote in the Processes (submitted December 2007) – revision of Texas RE Regional Standards Development Process.

During 2008, ERCOT ISO suggested revisions to the Standards Development Process by submitting SAR-001 to correct and further improve the balance of interests considered in the process. SAR-001 proposes that ERCOT ISO, which is the Reliability Coordinator, Balancing Authority, Transmission Service Provider, Transmission Operator, Interchange Authority, Resource Planner, and Planning Authority, become a segment and receive at least a portion of one vote. Other improvements to the Standards Development Process were added to this SAR, including a clarification that the Texas RE Board of Directors, instead of the ERCOT Board of Directors, approves all SARs. Initial comments to the changed procedure were received from the public in November 2008.

A Registered Ballot Body (RBB) was formed (with 46 members) for this SAR. In January 2009, this RBB voted on and passed the provisions of SAR-001 (with 37 of the 46 members voting), giving ERCOT a  $\frac{1}{4}$  vote and making additional improvements to regional standards development processes. The ERCOT Board approved these provisions at its February 2009 meeting. The approved provisions also changed the approval authority in the ERCOT region from the ERCOT Board to the Texas RE Board. The NERC Board of Trustees approved SAR-001 on May 6, 2009 and associated procedural changes on June 3, 2009, and NERC filed its Petition for Approval of the modifications on June 8, 2009 with FERC.

- SAR-002-TRE-01 – Development and Documentation of Regional UFLS Programs (submitted April 2008). This Standard Drafting Team (SDT) has been on hold while awaiting the national team's efforts on the UFLS standard. On May 16, 2009, this SDT submitted comments to NERC on the second draft of the proposed national standard. The SDT has determined that it will not need a regional UFLS standard if the current draft of the UFLS national standard does not change. If the proposed national UFLS standard does change significantly, the SDT is prepared to continue with this SAR to draft an applicable regional standard and follow the Standards Development Process for approval.
- SAR-003-TRE-01 – FERC-Ordered Modification to ERCOT CPS2 Waiver to R2 of BAL-001-0 (submitted April 2008). This standard has been drafted and is currently out for public comment. The SDT held a technical workshop in March 2009 to help educate the ERCOT region on frequency response in general and how this standard will help ensure reliability with better frequency response. The team has met four times to draft responses to comments submitted, and all responses are or will be posted when complete. At FERC staff's request, the drafting team will meet to discuss the proposed regional standard with FERC staff in August. The team anticipates presenting the revised draft SAR to the RSC in September.
- SAR-004-TRE-01 – ERCOT-Specific Sabotage Reporting Regional Standard (submitted in April 2008) was rejected by the RSC. Much of the reason for this SAR in the beginning was to include additional appropriate entities on the list of applicability. This may now be at least partially remedied by the proposed Joint Registration Organization (JRO) agreement that is being developed for the Load-

Serving Entity (LSE) function, because it proposes to include Transmission Owners (TOs) in the list of applicability for this CIP-001 standard.

- SAR-005-TRE-01 – Remove LSE Applicability from EOP-002
- SAR-006-TRE-01 – Remove LSE Applicability from MOD-017 and MOD-018
- SAR-007-TRE-01 – Remove LSE Applicability from MOD-019, MOD-020 and MOD-021

Based upon advice and guidance by FERC staff that a regional standard cannot be used to remove a NERC function from a standard and that joint or concurrent registration should be used to address any regional issues causing applicability issues, on February 4, 2009, the RSC voted to suspend activity on SAR-005, SAR-006 and SAR-007 to allow Texas RE time to attempt to facilitate a possible JRO agreement to address the applicability issues. Texas RE is continuing to facilitate a possible JRO through the LSE Registration Working Group.

An additional SAR for Disturbance Monitoring (PRC-002) was drafted but was then placed on hold until the continent-wide standard was further developed. The continent-wide standard has since been drafted and it appears that a regional standard on Disturbance Monitoring will not be necessary.

The RSC meets once a month. The SDTs meet as necessary and include WebEx participation. Texas RE employees facilitate all meetings and are directly involved in the non-technical aspects of the drafting of the standards. To promote wider awareness of and participation in the reliability standards process throughout the ERCOT region, Texas RE launched the Reliability Standards Tracking site in 2008. The tool allows all registered parties to efficiently submit comments on SARs and draft standards during commenting periods and allows members of the Registered Ballot Body (RBB) to vote online.

Texas RE staff participates in the NERC Standards Committee and Regional Reliability Standards Working Group and has contributed to the 2009-2011 NERC Work Plan. The Texas RE Manager of Standards was nominated and accepted into the NERC Communications and Planning Subcommittee of the NERC Standards Committee. The Texas RE Manager of Standards was nominated, accepted, and selected as Vice Chair of the NERC Project 2009-01 Disturbance and Sabotage Reporting Standard Drafting Team. In addition, the Texas RE staff screens draft reliability standards from other regions. Texas RE staff also screens proposed NERC standards that may have an impact on registered entities in the ERCOT region. To date, four proposed NERC standards have been screened and brought to the notice of RSC.

Texas RE informs stakeholders of the impact and requirements of emerging NERC standards through training at the Texas RE workshops (see Section III B). In general, Texas RE works to ensure that stakeholders have the most current and accurate information on reliability standards. Procedures, forms, meetings, minutes, notes, agendas, drafts, etc., for all regional activities associated with standards are posted in a timely fashion on the Texas RE website. Market notices on major topics and upcoming meetings are sent regularly to Texas RE email lists. Articles on reliability standards topics are included in the bi-monthly Texas RE newsletter.

Texas RE faces the challenge of the upcoming change in the ERCOT region systems from zonal to nodal. Texas RE staff participates in Nodal Protocol/Reliability Standards Alignment (NPRSA) Working Group, the ERCOT region taskforce organized to align

changes in the ERCOT Protocols language for the nodal market with NERC language. Due to delays in the implementation of the nodal market, this working group was recently put on hold until the nodal implementation is complete.

**B. Explain how the Regional Entity has the ability to develop regional standards and has a standards development process that provides for openness, due process and balancing of interests.**

The Texas RE Standards Development Process, as approved by NERC and FERC as Exhibit C to Texas RE's Delegation Agreement with NERC, provides for openness, due process, and balancing of interests. Participation in Texas RE's Standards Development Process is open to all organizations that are materially affected by the ERCOT region bulk power system (BPS), with no undue financial barriers, and any such entity has the right to participate by expressing an opinion, having its opinion considered, and having the right to appeal. Notice of all meetings of the Texas RE RSC and all drafting teams are provided on the Texas RE website and are open to the public.

The Texas RE Standards Development Process provides for a balance of interests, containing seven market segments and a requirement of a vote of at least two-thirds of the segments for approval of any regional standard. (As described above, a proposed revision to add an additional market segment, with a  $\frac{1}{4}$  vote, for the ERCOT ISO, has been submitted to and approved by the NERC Board and is now before FERC for approval.) No two segments can dominate, and no single segment can defeat any matter. In addition, each of the current seven segments has at least two representatives on the RSC. In 2008, 40 entities joined the RBB, representing about 25% of all ERCOT region members.

Texas RE's Standards Development Process provides for fair and due process by providing sufficient public notice of the intent to develop a standard. In addition, all proposed standards are posted on the Texas RE Standards Tracking Site for public comments. The site allows all interested parties to submit comments during the commenting period. The Process also provides an appeals process.

**C. State Regional Entity's assessment of its own effectiveness in reliability standards development since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

Texas RE's effectiveness in reliability standards development has steadily improved since its Delegation Agreement was approved in April 2007. Texas RE's first hurdle was to educate the users, owners, and operators of the BPS of the Standards Development Process and the need for involvement in the process by all industry segments. Texas RE primarily used its website and two 2007 Texas RE Standards and Compliance Workshops to begin to educate and inform ERCOT Market Participants about the Standards Development Process. Industry interest, participation, and understanding of the Standards Development Process have grown, particularly after the RSC was formed in December 2007.

Beginning in spring 2008, Texas RE made great strides in its efficiency and effectiveness. Texas RE worked with other regional entities to launch the Regional Standards Tracking Site described above. This tool greatly improves the efficiency by which standards can be presented and evaluated by all stakeholders, as well as allowing comments to be gathered from across the ERCOT region and votes to be easily

compiled from RBB members. Texas RE also began its e-newsletter, which communicates updates, status, and other information about standards to stakeholders. Finally, Texas RE also added a new Standards Coordinator position late in the spring 2008, which allowed Texas RE to further improve the efficiency of all standards-related tasks.

Texas RE standards development staff also participated in the 2007, 2008, and 2009 Texas RE Standards and Compliance Workshops to communicate and educate stakeholders about standards development.

**D. State any proposals of Regional Entity to improve its effectiveness in reliability standards development**

Texas RE Reliability Standards staff is leading the RSC in developing a scope of work for the RSC to include more comprehensive review and comments to the existing and proposed NERC standards under development for tracking of possible regional variances that may be necessary with the associated continent-wide efforts. Texas RE Standards staff presented the RSC with the 39 standards development projects in the current NERC workplan and asked the RSC to rank them in importance. Ten projects emerged as most important to the ERCOT region. The RSC plans to have subject matter experts (SMEs) make one presentation each month on the 10 projects for evaluation as to any potential regional standard that may be necessary. A presentation on NERC Project 2006-03 System Restoration and Blackstart (EOP-005, 006, 007 and 009) was made at the March RSC meeting. Chris Humphreys, Texas RE's critical infrastructure protection specialist, made a presentation on NERC Project 2008-06 (CIP-002 – CIP-009) Cyber Security Standards at the May RSC meeting.

Certain stakeholders submitted comments requesting improvements to the Texas RE website. The new Texas RE website (which is expected to publicly launch in July 2009) will have a Standards section that is intended to have improved clarity and navigation.

Texas RE Reliability Standards staff is considering having a regional Standards workshop (a longer and more detailed presentation than the normal standards presentation made during the Compliance workshop), to allow ERCOT region stakeholders to learn about standards in general and the process for developing new regional and national standards. If this workshop is warranted, it would occur in the latter half of 2009. Otherwise, Texas RE Reliability Standards staff will continue to include a standards section in the Compliance Workshop.

Stakeholders also submitted comments indicating that the NERC Fill-in-the-Blank standards have caused confusion. Texas RE supports the concept of revising the standards to remove the Fill-in-the-Blank components. Texas RE will develop (as necessary) any regional standards that are subsequently required.

A regional-wide announcement was sent out in December 2008 to update and solicit more RBB registrations, to ensure wider participation by all segments. This announcement was part of the ballot pool solicitation and formation efforts for SAR-001. This resulted in the 48 RBB members as of May 31, 2009.

Texas RE Reliability Standards staff will increase its participation in NERC Standards Committee meetings to stay current on all NERC Standards under Development for presentation to the ERCOT stakeholders. Texas RE has already begun participating in

the NERC Communication and Planning Subcommittee, the first meeting of which was held on March 16, 2009.

## **II. Organization Registration and Compliance Monitoring and Enforcement Program**

- A. Describe Regional Entity's activities and accomplishments in OC/CMEP since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007. This description should emphasize quantitative information, e.g.: Staffing; numbers of registered entities registered; numbers of workshops, seminars, training and education sessions, etc. conducted; numbers of compliance audits conducted and reports processed; numbers of other compliance processes conducted and processed, e.g., spot-checks, self-certifications, etc.; numbers of notices of violation issued and processed; numbers of mitigation plans processed.**

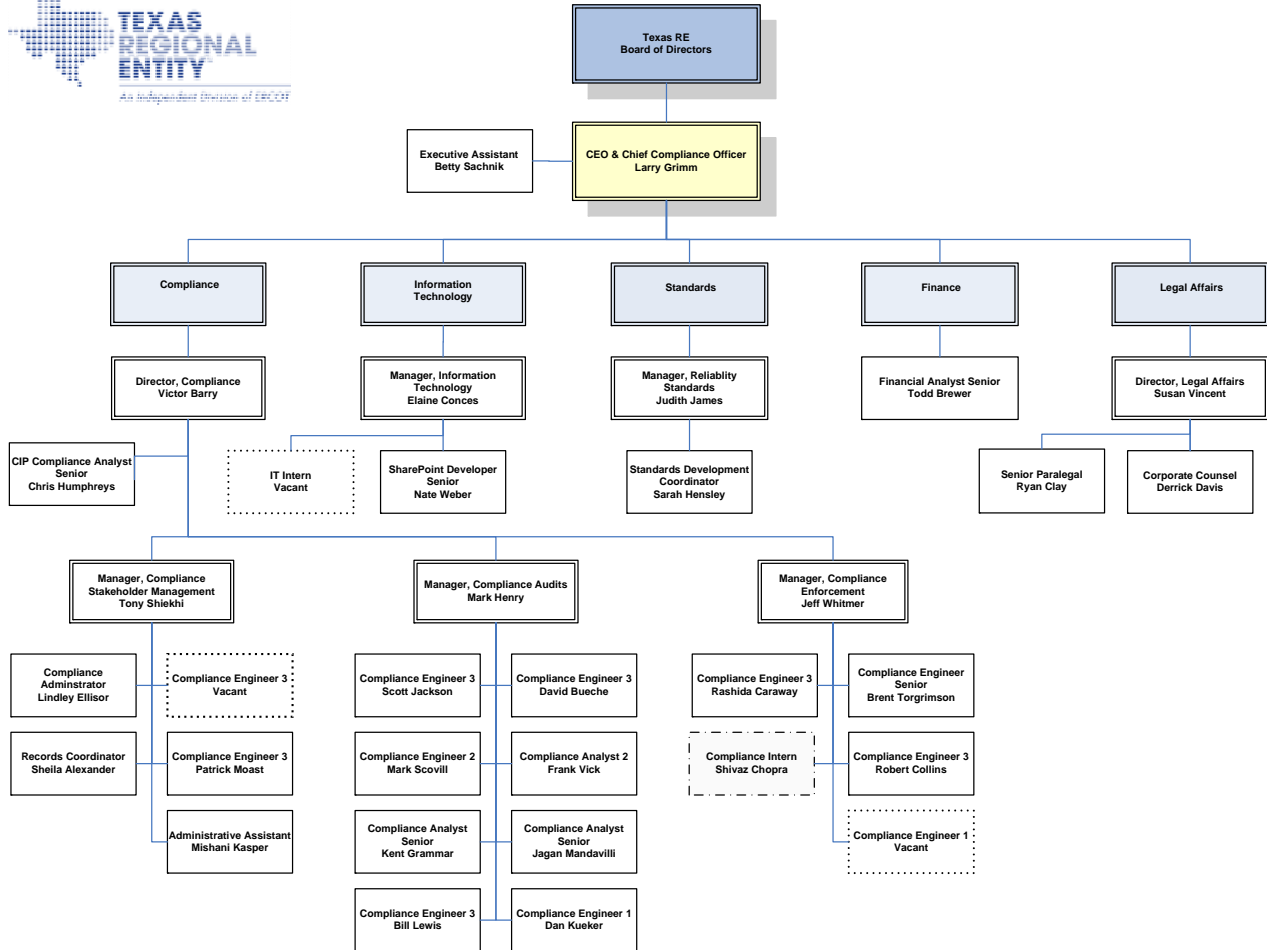
Texas RE staffing has increased steadily since January 1, 2007, when Texas RE had only nine (9) compliance employees. At the beginning of 2008, Texas RE had 11 compliance employees, but by December 2008, Texas RE grew to 17 full time employees and one part time intern for the Organization Registration and Compliance Monitoring and Enforcement Program area (out of 25 total full time staff for all of Texas RE). At year-end of 2008 Texas RE reached 100% of planned staffing levels, but it did operate for most of 2008 with several vacancies due to the difficulty of locating and recruiting experienced candidates and turnover.

For 2009, Texas RE's board approved 5 new positions to reach 22 full time positions for the Organization Registration and Compliance Monitoring and Enforcement Program area (four of which were filled by May 31, 2009). The Compliance area has one Director and the divisions have the following employee positions:

- Compliance Auditing: 9 positions
- Compliance Enforcement: 5 positions (one open)
- Compliance Stakeholder Management (including Registration and Certification): 6 positions (one open)
- Critical Infrastructure Protection: 1 position



# Texas RE Organizational Chart



## **Organization Registration and Certification**

Texas RE has 216 registered entities, registered for 334 Functions, as of May 15, 2009. Registration activity continues to evolve with modifications to entities' registrations related to changes in their businesses, joint registration organization (JRO) agreements, and changes to the registration criteria (e.g. LSE). Texas RE experienced two major registration disputes, one of which was appealed to and is still pending with FERC. The time expended on each registration appeal has been significant, but the hope is that registration disputes should reduce over time, as long as the NERC functions and registration criteria do not change.

On-going registration activities have continued to require much more time than anticipated by Texas RE. Texas RE acknowledges the stakeholder comments received regarding the responsiveness of the Texas RE registration process to questions or problems. Texas RE will add an additional employee in 2010 to supplement its registration staff, since the additional workload from new and modified (due to mergers, acquisitions, reorganizations, and turnover in registered entity personnel) registrations is not expected to reduce.

Due to the market design of the ERCOT region, no entities have been registered for the LSE function while Texas RE works with the stakeholders to develop a solution that eliminates all gaps and minimizes overlap. Texas RE has facilitated the NERC Load Serving Entity Registration Working Group (LSERWG) for the past eight months, to obtain stakeholder feedback and try to achieve a region-wide JRO agreement for the LSE function in the ERCOT region. Although this effort has required a large time commitment from a variety of Texas RE staff, this process has enabled significant communications regarding registrations in areas where the ERCOT deregulated market model appears to conflict with the NERC Registration Criteria. Texas RE anticipates that it will have an increase in registered entities once LSEs are identified and registered, but it hopes to have reduced the potential registration disputes through the LSERWG communications and JRO process.

## **Compliance Monitoring and Enforcement**

Please see section III.B.1. for a description of the workshops, seminars, training and education sessions.

Since January 1, 2007, Texas RE has conducted and processed the following:

- Audits: 72 (5 pre-June 18, 2007)
- Spot-checks: 24
- Self-certifications: 383
- CIP self-certifications: 292
- Complaints: 3 related to NERC standard violations
- Compliance Violation Investigation (CVI): initiated 1 Texas RE led and 1 NERC-led
- Self Reports processed: 93(79 pre-June 18, 2007)

Texas RE is in the process of negotiating or completing settlement agreements with six (6) entities for 18 violations. Settlements with two of these entities for four (4) violations have been conditionally approved by NERC BOTCC. A settlement with one other of

these entities, for 11 violations, was approved by NERC BOTCC and was filed with and is pending at FERC.

Summary of the number of violations assessed and processed between January 1, 2007 and May 31, 2009:

<b>Violation Timeframe</b>	<b>Number of Possible Violations Reviewed</b>	<b>Preliminary Notice of Alleged Violations</b>	<b>Notices of Alleged Violation Filed w/ NERC (#Violations)</b>	<b>Notices of Confirmed Violation Filed w/ FERC (#Violations)</b>	<b>Number of Violations Complete</b>
2007 Pre-June 18	206	N/A	206	N/A	206
2007 Post-June 18	28	28	28	21	21
2008	44	38	3	0	0
2009	8	5	5	0	0

Summary of the number of mitigation plans processed to May 31, 2009:

<b>Mitigation Plan Progress (for the below Violation Date Periods)</b>	<b>Number of Violations with Mitigation Plans Submitted</b>	<b>Number of Violations with Accepted and Approved by NERC Mitigation Plans</b>	<b>Number of Violations with Mitigation Plans Certified as Complete by Entity</b>	<b>Number of Violations with Mitigation Plans Verified as Complete by Texas RE</b>
2007 Pre-June 18	206	206	206	206
2007 Post-June 18	28	28	25	25
2008	36	6	36	21
2009	0	0	0	0

**B. Describe how the Regional Entity has the ability to enforce reliability standards and to provide for an adequate level of bulk power system reliability in its region.**

Texas RE is following the requirements as defined by the CMEP, Rules of Procedure (ROP), and the delegation agreement between Texas RE and NERC and has used these documents to create the framework for auditing, investigating and enforcement of reliability standards.

**AUDITING:** Texas RE has created and implemented an audit program designed around the required 3 and 6 year audit cycles and remains 100% on schedule with this plan.

Texas RE also uses the complete list of NERC-approved Actively Monitored Standards and Requirements as a minimum audit scope. Texas RE has also required all Compliance employees, not just the auditors, to complete the NERC required training classes for auditors so that all employees have a general understanding of the significance of the auditing process.

**ENFORCEMENT:** In addition to the Auditing program, Texas RE has implemented a separate Enforcement program with dedicated staff. The Enforcement group processes alleged violations originating from audits, spot-checks, self-certifications, complaints, self reports, and CVIs. This includes managing settlement negotiations and hearings associated with contested violations. The Texas RE Enforcement Program is also responsible for investigating potential reliability standards violations arising from BPS disturbances, outages, self reports and complaints.

**CONSISTENCY & COORDINATION:** Texas RE also fully participates in multi-region forums to share information related to best practices as they relate to the successful implementation of compliance auditing and enforcement. These include the Regional Entity Compliance Implementation Group (RCIG) (and associated working groups), and the Organization Registration and Certification Subcommittee (ORCS). Texas RE currently chairs the RCIG, whose main purpose is to foster cooperation and coordination, and improve consistency between the regions. The RCIG directs the activity of its working groups. Texas RE also participates in the Regional Entities Management Group whose members are the chief executives of each region and oversees all program areas, including compliance and standards development.

Texas RE also directly participates in many ERCOT committees, such as ERCOT's Technical Advisory Committee (TAC), Reliability & Operating Subcommittee (ROS) and the Wind Operating Task Force (WOTF), among others, to understand and track the reliability issues and challenges for the region and to provide comments from the Texas RE perspective when there are potentially significant reliability issues and challenges that are not being adequately considered and addressed. This proactive approach to monitoring and supporting reliability in the region has expanded in 2008 as staffing increased. Texas RE's direct involvement, most recently with wind generation issues, has greatly increased the visibility of reliability issues and expedited the implementation of regional rules (ERCOT Protocols) to strengthen reliability.

**C. Describe how the Regional Entity has fair and impartial procedures for enforcing reliability standards**

Texas RE has adopted and implemented the NERC Uniform Compliance Monitoring and Enforcement Program (CMEP) in accordance with its Delegation Agreement with NERC. Texas RE is committed to the following five (5) guiding principles:

1. Independence
2. Ethics & Integrity
3. Inclusiveness
4. Fairness & Openness
5. Organizational Effectiveness & Efficiency

Texas RE strives to be fair, unbiased and balanced in its actions and approach to enforcing reliability standards and acts to remain above suspicion with regard to

independence and ethical issues. Texas RE internal procedures incorporate these concepts. To provide a second level of checks and balances, Texas RE requires that all violations be reviewed and verified by a group other than the group that initially identified the alleged violation. It was partially for this reason that the Enforcement group was separated from the Audit group. In addition, all potential violations and penalties are reviewed by Texas RE Legal, the Director of Compliance and the CEO prior to issuance.

In addition, NERC provides regular oversight of the Texas RE audits and its related processes and procedures. This oversight provides yet another level of review of Texas RE's work for fairness, impartiality, and consistency. Texas RE also regularly engages in discussions with NERC staff about significant violations, prior to its issuance of penalties. This provides another level of oversight with respect to impartiality and fairness as well as striving to remain consistent with other regions.

All Texas RE employees and consultants must identify all potential relationships to or conflicts with market participants or registered entities and sign an Ethics Agreement verifying their compliance with Texas RE's Code of Conduct. Texas RE follows the CMEP requirements to provide biographies of all potential auditors prior to an audit to allow the entity to be audited to review these biographies and object to any potential or perceived conflicts that could impair fairness or impartiality. Texas RE also internally bars any employee from working on any compliance work related to an entity for which they have had a relationship for at least a 6 month separation period. Texas RE's Code of Conduct requires that there be no financial relationship with a registered entity and bars involvement on any compliance work for an entity where there is a personal or family relationship.

Texas RE has implemented a Compliance Hotline to allow anyone to report compliance or ethics complaints related to Texas RE, its employees or consultants, or a registered entity. The Hotline process is designed to direct any complaints to Texas RE Legal or the board of directors as appropriate, based on the complaint. To date Texas RE has received no complaints from the Compliance Hotline and has received no complaints of any kind regarding any failure of fairness or impartiality. Because Texas RE also performs non-statutory compliance functions for the Public Utility Commission of Texas (PUC), the PUC also maintains oversight to ensure that Texas RE's non-statutory compliance is performed in a fair and impartial manner.

At the end of every audit, Texas RE provides the NERC Questionnaire to allow the audited entity to directly report to NERC any concerns with fairness, objectivity or balance, in addition to other quality measures, with respect to how Texas RE carries out its auditing function.

**D. State Regional Entity's assessment of its own effectiveness in OC/CMEP since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed**

Texas RE's effectiveness has continuously improved over time through the enhancement of our internal processes, refinement of our organizational structure, the growing maturity of the understanding of the NERC processes, and the addition of talented staff. Added to this is our concerted effort to improve our communications with the other regions, NERC, FERC, and the registered entities which has resulted in greater efficiency and fewer misunderstandings.

As evidence of Texas RE's continuous improvement, all 2007 and 2008 audits, investigations, violations and mitigation plans are either closed or are on schedule with regularly monitored plans to meet milestones. Due to the complexity of some settlement negotiations, some preliminary violations have remained open for longer than originally anticipated. Implementing all procedures necessary to reach final NERC approval on violations and settlements has taken longer than anticipated in many instances. The work load increased throughout 2008. Texas RE has been able to improve its process efficiency with the growing maturity of the Texas RE and NERC organizations, but most Texas RE staff still must work longer hours than ideal to maintain the required schedule. The work load is expected to increase again in 2009, due to new registrations, CIP standards moving toward enforceability and the audit of Texas RE by FERC; so, Texas RE has attempted to hire all additional personnel as early in the year as possible.

In 2008, Texas RE and five (5) other regional entities formed a Consortium User Group to collaborate on and share resources for the development, modification and maintenance of portal software. As part of the Consortium User Group, Texas RE is actively participating in collaborative projects to improve the portal and to add new useful features, such as alleged violation tracking, and user-focused improvements, such as PDF records of forms. Texas RE is also participating in a Consortium User Group project to allow its portal to communicate directly with NERC's portal when the NERC portal comes on-line. Texas RE anticipates that improvements and additions to the portal will address the stakeholder comments requesting more electronic tools to improve efficiency.

**E. State any proposals of Regional Entity to improve its effectiveness in OC/CMEP.**

Texas RE acknowledges stakeholder comments about the application of the NERC Registration Criteria in the ERCOT region, given the statutory, market, and system design differences. Texas RE believes that the use of the stakeholder LSEWG to help craft a solution for LSE registration in the ERCOT region to address all standard requirements without any reliability gaps has been useful. This cooperative effort between Texas RE, registered entities, and NERC has proven to be an efficient method to identify needed variances to NERC standards, regional standards, and JRO agreements that can effectively address reliability needs. Texas RE will continue to communicate with and answer questions of stakeholders regarding registrations, at its Compliance Workshops, in newsletters, and as needed, with specific groups of stakeholders.

Texas RE believes that the best means to improve effectiveness of the CMEP is for NERC and the regional entities to continue to consistently communicate and coordinate regarding new issues as they are identified or to address any confusion that may arise due to changes in standards, processes or interpretations. Even though the reliability standards have been enforceable for 24 months, they are still relatively new for both registered entities and the auditors. Implementation of the NERC Compliance Portal and its integration with the Texas RE portal, which is in-process, should also help to continuously improve Texas RE's efficiency and effectiveness. Texas RE anticipates that these portal improvements will address the stakeholder requests for electronic tools to improve efficiency.

### **III. Other Program Areas**

#### **A. Reliability Readiness Evaluation and Improvement Program**

- 1. Describe Regional Entity's activities and accomplishments in Reliability Readiness Evaluation and Improvement since January 1, 2007, including discussion of improvements in this area.**

One Reliability Readiness Evaluation (of ERCOT ISO) was conducted in the ERCOT region. ERCOT ISO is the only RC/TOP/BA in the region.

- 2. State Regional Entity's assessment of its own effectiveness in Reliability Readiness Evaluation and Improvement since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

Texas RE's effectiveness with respect to Reliability Readiness Evaluations has not changed since 2007. Texas RE's Reliability Readiness Program has operated effectively, but only one Registered Entity has been subject to these evaluations. NERC is now phasing out this Program.

- 3. [Discussion of proposed improvements not needed, since this program is being phased on in the first quarter of 2009.]**

N/A.

#### **B. Training, Education and Operator Certification**

- 1. Describe Regional Entity's activities and accomplishments in Training, Education and Operator Certification since January 1, 2007, including discussion of improvements in this area.**

Number of workshops, seminars, training, and education sessions conducted since January 1, 2007:

- Standards and Compliance workshops - 5
- CIP workshops – 1
- Operations Training Seminar Sessions – 14

In addition to compliance workshops, Texas RE staff also facilitates the ERCOT Operator Certification Program. This includes maintaining and updating the ERCOT Fundamentals Training Manual and administering the System Operator testing process.

Texas RE has implemented a website ([www.texasre.org](http://www.texasre.org)) that provides direct public access to information about Texas RE. The site includes audit schedules, documents, newsletters, announcements, and important links to other sites, such as NERC's.

Texas RE has also established a bi-monthly newsletter that is published on our website and is sent via email to registered entities and all others who have subscribed to the Texas RE's email list.

In addition, Texas RE has also participated in numerous industry sponsored seminars and panels (e.g. National Rural Electric Cooperative Association, Gulf Coast Power Association, and Wind Coalition) to provide as much information to the industry as possible as well as to receive feedback.

Texas RE's training program continues to improve and consistently receives favorable reviews from participants. With few exceptions our workshops and seminars are fully subscribed. We have added the ability to support remote attendance using call-in numbers and WebEx presentations this year.

- 2. State Regional Entity's assessment of its own effectiveness in Training, Education and Operator Certification since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

Over time Texas RE has added additional topics to its training program, such as the recent CIP Workshop, and has provided greater depth to our traditional Reliability Standards and Compliance workshops through the greater use of panel sessions and lessons learned segments.

Texas RE's operations training seminars continue to run at full capacity with some attendance from industry participants from outside our region, due to the quality of the seminars.

Texas RE strives to support and speak at seminars in the ERCOT region held by other organizations, in order to provide the most information to the widest possible group of people.

- 3. State any proposals of Regional Entity to improve its effectiveness in Training, Education and Operator Certification.**

Texas RE will continue to request, review, and incorporate helpful feedback from stakeholders regarding Texas RE's training, education, and operator certification programs. Texas RE will also modify these programs as needed to incorporate any changes to NERC standards or procedures.

### **C. Reliability Assessment and Performance Analysis Program**

- 1. Describe Regional Entity's activities and accomplishments in Reliability Assessment and Performance Analysis since January 1, 2007, including discussion of improvements in this area.**

Texas RE has established a role in cooperation with the technical subject matter experts at ERCOT ISO and registered entities on the preparation of seasonal and annual long term planning assessments. Texas RE reviews the reports for completeness prior to forwarding to NERC. Similarly, Texas RE staff works with the region's Reliability Coordinator (ERCOT ISO) to monitor system events for possible violations and reliability risks. Texas RE often requests data and analysis from the



ERCOT ISO to assist in the determination of the root cause of events, and any new trends or potential risk to the BPS. In addition, Texas RE also monitors reliability studies and reports from ERCOT stakeholder organizations, such as the Reliability and Operations Subcommittee (ROS) for potential risks or analysis of events.

Texas RE attends ERCOT committees, such as ERCOT's Technical Advisory Committee (TAC), Reliability & Operating Subcommittee (ROS) and the Wind Operations Task Force (WOTF) to better understand the reliability issues and challenges for the ERCOT region and to provide comments from the Texas RE perspective when it believes there are significant reliability issues and challenges that are not being adequately considered or addressed. This proactive approach to monitoring and supporting enhancements to Protocols and Operating Guides that enhance reliability or support NERC goals in the ERCOT region has expanded in 2008 as staffing increased. Texas RE's direct involvement, for example with wind generation issues, has greatly increased the visibility of new reliability issues and expedited the implementation of regional rules to strengthen reliability.

Texas RE also regularly communicates with NERC staff regarding reliability challenges of special interest in the ERCOT region (e.g. wind generation) to keep NERC apprised of risks, improvements, and on-going strategy.

On a monthly basis, Texas RE also calculates and reports on a variety of reliability performance metrics (e.g. Regional (ERCOT Protocol) measures and NERC Reliability Standards measures) to its Board of Directors. Texas RE also uses this information, when appropriate, to identify potential standards violations or declining reliability trends that need to be investigated.

**2. State Regional Entity's assessment of its own effectiveness in Reliability Assessment and Performance Analysis since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

Texas RE has significantly improved in its effectiveness in this area. In 2008, as staff was added, Texas RE became much more proactive in assessing and addressing reliability performance issues. As with most new programs, a great deal of effort has gone into defining how to best work with the ERCOT ISO and other stakeholders to build this program and to increase Texas RE's ability to effect change before reliability is adversely impacted or violations occur. A key goal is to facilitate proactive consideration of matters important to reliability that may not yet be part of the mandatory requirements in NERC's developing reliability standards.

**3. State any proposals of Regional Entity to improve its effectiveness in Reliability Assessment and Performance Analysis.**

Texas RE plans to use a continual process improvement plan for Reliability Assessment and Performance Analysis. This will be driven by the maturation of existing relationships within the region and the further strengthening of staff in 2009, including the addition of one Compliance employee with system planning expertise to assist with the reviews of the seasonal Reliability Assessments for the ERCOT region.

## **D. Situational Awareness and Infrastructure Security Program**

- 1. Describe Regional Entity's activities and accomplishments in Situational Awareness and Infrastructure Security since January 1, 2007, including discussion of improvements in this area.**

Situational Awareness takes several forms for Texas RE and can most accurately be differentiated by the time frame related to awareness. To support awareness for real time events and emergencies Texas RE has staff assigned to track and monitor ERCOT ISO status, briefings and email updates and also participates in teleconferences for emergency situations, such as the hurricane that struck the Houston/Galveston area in 2008. To support long term Situational Awareness, Texas RE also monitors changes to the ERCOT BPS and how the ERCOT region is addressing these changes. A primary example of this type of Situational Awareness would be Texas RE's activities with respect to the growth of wind power in the region and how it will affect the reliability of the BPS.

Texas RE also worked with ERCOT ISO to provide real-time data to the FERC Situational Awareness center in Washington D.C., and began constructing its own Situational Awareness room in March of 2009 to enable system monitoring and awareness.

- 2. State Regional Entity's assessment of its own effectiveness in Situational Awareness and Infrastructure Security since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.**

Texas RE has continued to improve its efforts related to Situational Awareness. A key enabler was the addition of staff and the maturation of our core audit, enforcement and registration programs that allowed us to add more focus on Situational Awareness. Texas RE was also able to add a full-time critical infrastructure protection (CIP) specialist employee in 2008. The CIP specialist has been instrumental in participating in national CIP program development and the creation of a CIP program for Texas RE, and he currently serves as Chair on the CIP Compliance Working Group.

- 3. State any proposals of Regional Entity to improve its effectiveness in Situational Awareness and Infrastructure Security.**

Texas RE has begun building an improved Situational Awareness system in our new facility. This will enable Texas RE to better display and more efficiently analyze the real-time feeds of data from the ERCOT ISO and to provide better insight into the current state of the ERCOT BPS.

## **E. Budgeting**

- 1. Describe Regional Entity's activities and accomplishments in the development and submission of its annual business plan and budget, beginning with the 2007 business plan and budget.**

Texas RE successfully obtained NERC and FERC approval of both its 2007 and 2008 business plans and budgets and conditional approval of its 2009 business plan and budget. Similarly to the other regional entities and NERC, Texas RE has been able to improve its budgeting estimates and processes since its submission of its 2007 business plan and budget, primarily because the expectations of regional entities have become clearer over the past two years and Texas RE has gained experience in performing regional entity duties.

Texas RE followed NERC guidance and used NERC templates when it prepared its 2007 business plan and budget. At the time all 2007 regional entity budgets were developed, however, NERC and FERC expectations about regional entity performance were just beginning to evolve. No regional entity had experience in performing duties as a regional entity and Texas RE had no dedicated finance employees. Texas RE's 2007 business plan and budget was in accordance with NERC guidance, but it projected significantly higher than the actual expenditures. The primary reason for this positive variance was because this budget anticipated a full year of operations, but (a) Texas RE's Delegation Agreement was not conditionally approved by FERC until April 2007; and (b) per FERC order, the implementation of mandatory standards did not begin until June 2007. Because of this, Texas RE delayed increasing its staffing until mid-2007 and the implementation of its capital (hardware and software) projects until 2008. In addition, Texas RE had a more difficult time than anticipated in locating and hiring qualified staff, so it experienced unintended vacancies through mid-2008.

Since 2007, Texas RE gained experience as it performed its registered entity duties, in accordance with its Delegation Agreement, the NERC Rules of Procedure, NERC guidance, and FERC orders. All Texas RE employees track their time, using electronic timesheets incorporating the functional categories in the NERC Chart of Accounts and separating time spent on non-statutory duties. Each employee must submit a timesheet twice monthly, in accordance with the payroll cycle.

In 2008, Texas RE implemented budgeting and accounting guidelines, along with its other corporate and governance policies and procedures. In mid-2008, Texas RE improved its time tracking consistency by developing and providing additional training to its employees on time and expense guidelines. These guidelines were shared with NERC and the other regional entities.

As Texas RE's experience as a regional entity has grown, the time tracking system has captured the amount of time Texas RE employees spend working in each functional area. This allows Texas RE to more accurately budget for future periods. Texas RE acknowledges that the expectations and requirements of Texas RE and the other regional entities will likely continue to evolve over the next few years, but Texas RE's budget procedures and time tracking system should continue to help Texas RE to produce quality budget projections, to the extent any modifications to its duties are known.

Texas RE followed all NERC guidance and templates in preparing its 2008 business plan and budget. Because Texas RE was required to prepare and obtain board approval for the business plan and budget in mid-2007 and the reliability standards became mandatory in June 2007, Texas RE still had only a partial year of experience at the time of the 2008 budget preparation. The 2008 budget development process was improved because (a) Texas RE, NERC, and the other regional entities had the

benefit of FERC orders on the 2007 budgets; (b) Texas RE hired a financial analyst; and (c) NERC, Texas RE, and the other regional entities met to discuss and gain general consensus on the budget requirements, given the short history of the regional entity organizations.

Texas RE makes it a priority to diligently and effectively communicate with NERC regarding all required financial reports. Texas RE will continue to keep this as a priority and will continue to provide all required financial reports on or before the date due.

In 2008, Texas RE established a separate cash investment account for the segregation of any fines and penalties, to ensure such monies are not commingled with operating funds. In coordination with NERC and the other regional entities, Texas RE established a process for the accounting of fines and penalties.

Texas RE's 2009 business plan and budget is improved over its previous budgets, because Texas RE has gained significant performance experience and has the benefit of understanding the time required for all of its regional entity duties. Further, NERC and the regional entities spent even more time meeting and discussing the NERC templates and the procedures to be followed by the regional entities in their budgeting process, which improved the consistency of the business plans and budgets.

Texas RE followed all NERC guidance and templates in preparing its 2009 business plan and budget and was required to obtain Texas RE board approval before the final submission to NERC. In addition to process improvements made by NERC for the 2009 business plan and budget process, Texas RE leveraged improvements made to its time-tracking and financial operations implemented in 2008 to further improve the process for 2009. Texas RE has and will continue to make improvements to its financial function and it is confident that these changes will enhance future period budget requests.

**2. State Regional Entity's assessment of its own effectiveness in developing its business plans and budgets and in the submission of its business plans and budgets in a consistent manner with NERC and the other Regional Entities.**

Texas RE's effectiveness in developing and submitting business plans and budgets in a consistent manner with NERC and the other regional entities has steadily improved with each filing. For all of its submitted business plans and budgets, Texas RE has followed NERC guidance and templates, attended all scheduled budgeting meetings with NERC and the other regional entities, and had numerous discussions with NERC and the other regional entities regarding the preparation of the business plans and budgets. As the NERC and regional entity experience has grown, NERC improved its processes and templates and hosted more discussions with the regional entities to try to improve the consistency of the business plans and budgets. Overall, Texas RE's business plan and budget was very consistent with NERC guidance and the other regional entities.

Texas RE will continue to work with the other regional entities to strive for even greater consistency in budgeting and in the creation of uniform metrics. The improvement in the consistency of the nine start-up entity business plans and budgets, as expectations and duties for these entities have continued to evolve over

the past two years, seems quite good. Due to the varying structures of the regional entities, there could still be differences in how each organization prepares its respective operating budgets, but, particularly in light of the October 16, 2008 FERC Order on the 2009 business plans and budgets, the regional entities will continue to discuss and harmonize any remaining differences with NERC and each other.

**3. State any proposals of the Regional Entity to improve its effectiveness in submitting effective, adequate and consistent business plans and budgets.**

- Texas RE suggested that NERC and the regional entities use generally accepted accounting principles to increase the level of consistency in the business plans and budgets. This requires NERC and each regional entity to prepare an operating budget and a separate capital expenditures budget. This will occur for each region's 2010 Business Plan & Budget.
- Texas RE believes that NERC and the regional entities need to standardize language and expectations regarding the acceptable components of indirect costs so that the regions can consistently budget certain expenses as either indirect (overhead) or direct (functional). With two full years of experience, and in accordance with FERC guidance, NERC and the regional entities should be able to implement a uniform expense allocation that will enhance consistency among the regional entities and NERC.
- Texas RE suggests NERC consider implementing a uniform budgeting tool, in place of the NERC-supplied Excel spreadsheet templates, to capture and project expected budgetary needs for each region. Due to the complexity of budgeting to the function level for so many entities, it would be useful if a common tool could be used by NERC and all regional entities. This could help improve efficiency and consistency by allowing each organization to prepare its budgets in a more automated fashion.
- Texas RE believes that the adoption of uniform metrics would enable the identification of trends that would be useful for projecting future resource needs. NERC and the regional entities have already started making efforts toward this goal.
- Texas RE plans to further enhance its time-tracking system, to add additional departmental codes, which will add additional detail to the financial data that will further enhance management and financial reporting capabilities. This enhancement will be in compliance with the NERC Chart of Accounts, and is expected to be useful in aiding management decision making.
- Additionally, given the experience of all the regional entities, and with the hope that its processes and templates will need fewer changes during 2009, Texas RE hopes to have time to work with other regional entities to identify and determine trended and comparative financial results for the 2009 operating year which will enhance the consistency of the regional entities' future business plans & budgets.

**ATTACHMENT 4H**

**WESTERN ELECTRICITY COORDINATING COUNCIL**

**STATEMENT OF ACTIVITIES AND ACHIEVEMENTS**



**WESTERN ELECTRICITY COORDINATING COUNCIL  
STATEMENT OF ACTIVITIES AND  
ACCOMPLISHMENTS IN CARRYING OUT ITS  
DELEGATED RESPONSIBILITIES  
FOR THE PERIOD  
JANUARY 1, 2007 THROUGH MAY 31, 2009**

**JUNE 25, 2009**

## INTRODUCTION

Pursuant to regulation 18 C.F.R. §39.3(c) of the Federal Energy Regulatory Commission (FERC), the North American Electric Reliability Corporation (NERC) is required to submit a self-assessment of its performance three years from the date of its certification as the Electric Reliability Organization (ERO) for the United States of America. NERC must also include an assessment of the effectiveness of each Regional Entity. As part of the process of developing the Regional Entities' assessments, NERC has requested that each Regional Entity provide a Statement of Activities and Achievements for distribution and public comment. This document provides the Western Electricity Coordinating Council's (WECC) Statement of Activities and Achievements from January 1, 2007 to May 31, 2009.

Public comment on the first draft of NERC and the Regional Entities' Statement of Activities and Achievements to October 31, 2008 was solicited from January 14, 2009 to February 25, 2009 via a questionnaire posted on the NERC Web site. Public comment on the second draft was solicited from April 27 to May 29, 2009. WECC actively promoted both comment periods to its members, Registered Entities, and other stakeholders prior to these respective deadlines. WECC analyzed the data received and identified areas for improvement in its operating procedures. This third draft of WECC's Statement of Activities and Achievements has been updated through May 31, 2009 and contains discussion on the areas for improvement as identified by the first and second rounds of stakeholder feedback.

The majority of the feedback falls into the predefined sections of this Assessment document. However, WECC also received useful comments from stakeholders regarding:

1. The WECC corporate Web site [www.wecc.biz](http://www.wecc.biz).
2. Access to WECC meetings.

WECC is in the process of redesigning its corporate Web site, which will be launched in July 2009. The feedback received provided useful guidance for WECC's Web site developers. Stakeholders indicated a desire for improved navigability and documentation cataloging. Attention is therefore being paid to designing a site with more intuitive navigation and documentation storage. Other site enhancements include a more advanced search function that should also improve the user's experience. Some stakeholders raised concerns about broken links. While it is not possible to prevent this from occurring when transitioning to a new site, WECC will work to minimize the incidence of broken links. In particular, WECC will focus on links to critical documents on the FERC and NERC sites (i.e., FERC filings and NERC Standards) and any critical links on the NERC Web site that link to documents on the WECC Web site. After the launch of the new Web site, any further refinements to site structure will be posted on the homepage to alert users of any potential changes to existing links.

While some stakeholders commented favorably about WECC meetings, many indicated the need for WECC to provide increased remote access through the use of Webinars and WebEx. WECC began Webcasting all of its Standing Committee meetings in October 2008 and is considering extending the use of that medium.



## **BACKGROUND**

WECC is the Regional Entity responsible for the entire Western Interconnection. WECC is the successor to the Western Systems Coordinating Council (WSCC), which was formed in 1967 by 40 electric power systems serving all or part of the 14 Western states and British Columbia, Canada. WECC was formed on April 18, 2002 by the merger of the WSCC, Southwest Regional Transmission Association, and Western Regional Transmission Association. WECC continues to be responsible for coordinating and promoting electric system reliability as had been done by the WSCC since its formation.

WECC is geographically the largest and most diverse of the eight Regional Entities that have Delegation Agreements with NERC. WECC's service territory extends from Canada to Mexico. It includes the provinces of Alberta and British Columbia, the northern portion of Baja California, Mexico, and all or portions of the 14 Western states between. Due to the vastness and diverse characteristics of the region, WECC and its members face unique challenges in coordinating the day-to-day interconnected system operation and the long-range planning needed to provide reliable electric service across nearly 1.8 million square miles.

## **MEMBERSHIP**

WECC has 253<sup>1</sup> members divided into the following seven membership classes:<sup>2</sup>

1. Large Transmission Owners
2. Small Transmission Owners
3. Transmission Dependent Energy Service Providers
4. End Users
5. Representatives of State and Provincial Governments
6. Canadian Members
7. Members at large

Membership in WECC is open to any person or entity that has an interest in the reliable operation of the interconnected Bulk Electric System (BES) in WECC's region. Membership of WECC is not a requirement for participation in the WECC standards development process.<sup>3</sup>

## **STATUTORY FUNCTIONAL SCOPE**

WECC has been approved by FERC as a Regional Entity with authority — pursuant to the WECC/NERC Delegation Agreement — to create, monitor, and enforce standards for the reliable operation of the BES in the Western Interconnection.

WECC's role as Reliability Coordinator was recognized by FERC through its acceptance of NERC's Compliance Registry.<sup>4</sup>

## **STAFFING**

Since January 2007, WECC's headcount has almost tripled from 47 employees to 135 employees. The scale of increase is primarily a result of WECC's Reliability Coordination Strategic Initiative (RCSI) and the Compliance Monitoring and Enforcement Program (CMEP). WECC does employ the resources of consultants and contractors from time-to-time as the workload demands.

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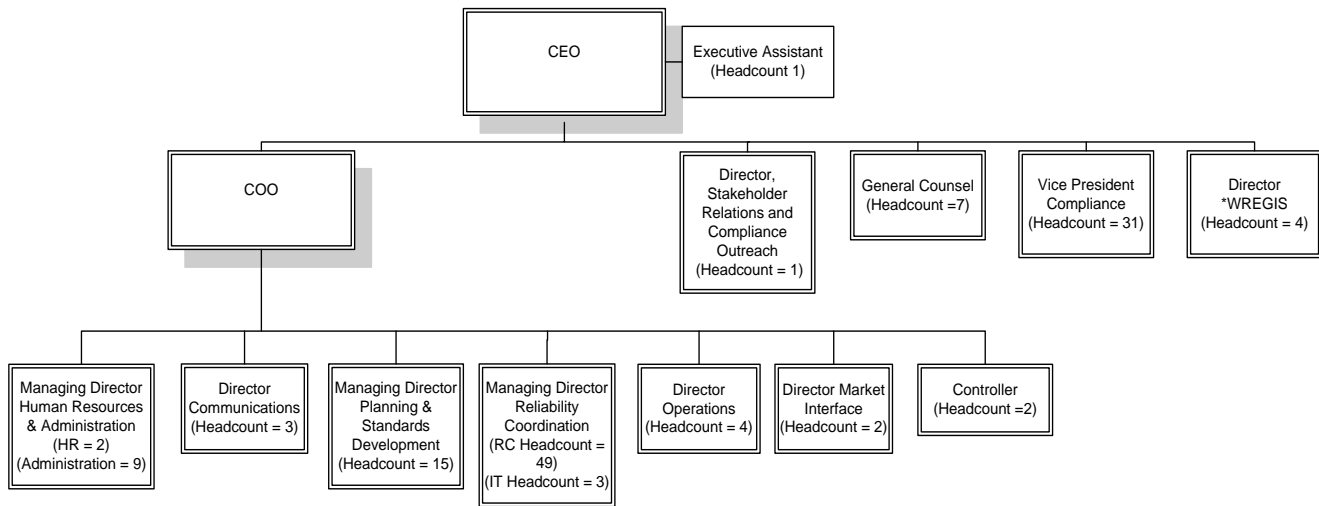
<sup>1</sup> As of May 31, 2009.

<sup>2</sup> For purposes of voting for Board representation, all Canadian members of WECC form "Class 6." For all other purposes, Canadian members participate in member classes 1–5 and 7 according to their characteristics. See Section 6.2.1 of the WECC Bylaws.

<sup>3</sup> Non-WECC members may participate in standards drafting teams, and Interested Stakeholders may vote on Regional Reliability Standards. Interested Stakeholder voting is covered in Section 8.6 of the WECC Bylaws.

<sup>4</sup> NERC 119 FERC ¶ 61,059 (2007) Order on Rehearing.

## WECC ORGANIZATIONAL CHART<sup>5</sup>



**Actual Headcount: 135**  
**\*WREGIS is non-statutory**

<sup>5</sup> As of May 31, 2009.

## I. Reliability Standards Development

### A. Describe Regional Entity's activities and accomplishments in regional reliability standards development since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007.

Prior to the passage of the Energy Policy Act of 2005 and the addition of Section 215 to the Federal Power Act, the reliability of the Western Interconnection was managed through the cooperative efforts of Western entities that agreed to bind themselves contractually to certain criteria under the Reliability Management System Agreements (RMS Agreements). Prior to January 1, 2007, WECC anticipated FERC approval of mandatory national reliability standards and began an effort to convert certain Regional Criteria in the RMS Agreements to Regional Reliability Standards under Section 215 of the Federal Power Act. WECC also initiated efforts to develop a Regional Reliability Standard to address Automatic Time Error Correction (ATEC) in the Western Interconnection.

#### **Regional Reliability Standards from the RMS Agreements**

WECC identified eight criteria from the RMS Agreements that met the statutory requirements for development of Regional Reliability Standards. Those eight criteria covered components that were either not addressed in NERC's Continent-wide Reliability Standards or included more stringent requirements in the Western Interconnection. Due to timing concerns, WECC submitted the first set of Regional Reliability Standards (as Tier 1 Standards) to NERC with necessary formatting changes but with no modification to the RMS Agreements' content. Stakeholders have indicated that certain of WECC's Tier 1 Standards do not make clear to which entities they apply. WECC recognizes that some of the translations result in old terms being carried forward; however, this has been addressed during the redrafting process. NERC filed the WECC Regional Reliability Standards with FERC on March 26, 2007.

FERC approved the first eight WECC Regional Reliability Standards on June 8, 2007<sup>6</sup>, with an effective date concurrent with 83 NERC Continent-wide Reliability Standards. FERC ordered WECC to complete its Regional Reliability Standards development process to create permanent replacement standards within one year of FERC approval. On April 16, 2008, WECC's Board of Directors (Board) approved seven Regional Reliability Standards<sup>7</sup> replacing the first set of eight. Since that time, WECC has been actively engaging NERC through NERC's *Regional Reliability Standards Evaluation Procedure*. The NERC Board of Trustees has approved all seven replacement WECC Regional Reliability Standards. On February 9, 2009, NERC submitted four of the seven replacement WECC Regional Reliability Standards to FERC for approval:

1. FAC-501-WECC-1 — Transmission Maintenance
2. PRC-004-WECC-1 — Protection System and Remedial Action Scheme Misoperation

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<sup>6</sup> Mandatory Reliability Standards for the Bulk-Power System, 118 FERC ¶ 61,218 (March 16, 2007), *order on reh'g*, 120 FERC ¶ 61,053 (July 19, 2007).

<sup>7</sup> The requirements of PRC-STD-001-1 (Certification of Protective Relay Applications and Settings) and PRC-STD-003-1 (Protective Relay and Remedial Action Scheme Misoperation) were merged into a single replacement standard, PRC-004-WECC-1.

3. VAR-002-WECC-1 — Automatic Voltage Regulators
4. VAR-501-WECC-1 — Power System Stabilizer

On March 25, 2009, NERC submitted two additional replacement WECC Regional Reliability Standards to FERC for approval:

1. BAL-002-WECC-1 — Contingency Reserves
2. TOP-007-WECC-1 — System Operating Limits

WECC continues to work with NERC to get the remaining replacement WECC Regional Reliability Standard (IRO-006-WECC-1 — Qualified Transfer Path Unscheduled Flow Relief) submitted to FERC.

### **Canada**

The Canadian provinces account for approximately 15 percent of the Western Interconnection's load. Canadian entities play a vital role in the function of WECC and in the reliability of the system. Alberta and British Columbia are separate jurisdictions with different regulatory structures.

WECC is working with the Alberta Electric System Operator and the government of Alberta, as well as the government of British Columbia and the British Columbia Transmission Corporation, to provide assistance as they consider whether and how to develop and enforce reliability standards.

RMS Agreements have been signed by entities in Alberta and British Columbia and continue in force. WECC does not have authority under U.S. law to impose penalties in Canada.

### **Mexico**

The Mexican national utility, Comisión Federal de Electricidad (CFE), has a seat on the WECC Board. As the regulatory systems common in the United States and Canada are not present in Mexico (CFE is a department of the Mexican federal government), WECC's standards and compliance efforts in Mexico rely on the RMS Agreements, to which CFE is a signatory.

### **Automatic Time Error Correction**

WECC identified the need for a Regional Reliability Standard to address ATEC issues in the West. WECC followed the *Process for Developing and Approving WECC Standards*, which resulted in WECC Board approval of a WECC ATEC Regional Reliability Standard on July 27, 2007. The NERC Board of Trustees approved the WECC ATEC Regional Reliability Standard on March 26, 2008. FERC issued a Notice of Proposed Rulemaking (NOPR) on the proposed WECC ATEC Regional Reliability Standard on November 20, 2008.<sup>8</sup> Public comments on the NOPR were due January 12, 2009. On May 21, 2009, FERC issued Order No. 723 approving the WECC ATEC Regional Reliability Standard. The rule will become effective 30 days after publication in the Federal Registry. The rule was published in the Federal Registry on May 28, 2009. In its Final Rule, FERC directed the ERO to revise the violation risk factors from lower to medium. They also directed the ERO to submit new violation severity levels for each requirement and sub-requirement that has been assigned a violation risk factor. In addition, FERC directed WECC to develop several modifications to the Regional Reliability Standard.

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<sup>8</sup> Notice of Proposed Rulemaking, 125 FERC ¶ 61,200 (November 20, 2008)(Western Electricity Coordinating Council Regional Reliability Standard Regarding Automatic Time Error Correction).

## **Frequency Responsive Reserves**

On May 15, 2008, in adherence with the *Process for Developing and Approving WECC Standards*, WECC announced its intent to begin development of a Frequency Responsive Reserves Regional Reliability Standard. On July 22, 2008, a drafting team was formed and held the first of several meetings. On October 21, 2008, also in adherence with the *Process for Developing and Approving WECC Standards*, the Frequency Responsive Reserves drafting team notified the WECC Standards Request Routing Committee (SRRC) that, in the opinion of the drafting team, a Regional Reliability Standard was not appropriate at this time. The Frequency Responsive Reserves drafting team cited the following reasons for the recommendation:

- The decision to draft a standard was made using data that was flawed and incomplete. Subsequent data indicates the earlier results are in question.
- Drafting a standard (with associated penalties) based on flawed and incomplete data may result in unintended reliability consequences while imposing financial liability on entities based on incorrect data and associated conclusions.
- Implementation of a criterion (as opposed to a standard) grants WECC the opportunity to review the accuracy and efficacy of the resultant work product before imposing unknown reliability risks on the grid.
- Current data collection capabilities may be inadequate to glean the needed data granularity on which penalties associated with a standard would be based.

The SRRC concurred with this recommendation and notified the WECC Board and WECC community. The drafting team was retained and is currently working on the development of a WECC Regional Criterion to address Frequency Responsive Reserves. The drafting team is adhering to its original standards development schedule wherever possible.

## **Automatic Voltage Regulator (AVR)**

On September 15, 2008, in adherence with the *Process for Developing and Approving WECC Standards*, WECC announced the formation of a WECC drafting team to develop a WECC Automatic Voltage Regulators Regional Reliability Standard. This drafting team was formed to address concerns about the existing AVR standards raised by stakeholders. A drafting team has been selected and the first meeting of the drafting team was held on March 10, 2009 via teleconference. The next meeting of the drafting team is scheduled for June 8-9, 2009.

### ***B. Explain how the Regional Entity has the ability to develop regional standards and has a standards development process that provides for openness, due process and balancing of interests.***

In 1999, the WSCC developed a document entitled *Process for Developing and Approving WSCC Standards*. This document identified WSCC standards as including the WSCC's operating, planning, and market interface policies, procedures, and criteria. The document also described the associated measurements for determining compliance and was updated several times before it was submitted as Exhibit C of WECC's initial Delegation Agreement. Consequently, WECC had the infrastructure in place to address and develop the proposed Regional Reliability Standards. Only

limited modifications were required to the version of *the Process for Developing and Approving WECC Standards* that was submitted to comply with FERC's direction regarding Exhibit C to the *WECC Delegation Agreement*.

In response to FERC's April 19, 2007 order accepting the Regional Delegation Agreements, WECC modified its *Process for Developing and Approving WECC Standards* to allow participation by non-WECC members. Initially, voting on WECC Regional Reliability Standards was limited to WECC members. This restriction, however, was tempered by WECC allowing membership to all Western stakeholders. WECC modified its Bylaws and *Process for Developing and Approving WECC Standards* to allow stakeholders to participate in the development of Regional Reliability Standards and to vote on the Regional Reliability Standards' approval. All Western Interconnection stakeholders are included in WECC's two voting classes: Transmission Providers and Transmission Customers. The influence of particular classes as identified in NERC's ballot bodies are thus diluted by the inclusion of multiple stakeholder groups in either of the two classes.

A subsequent FERC order issued on March 21, 2008, required WECC to make a further modification to its *Process for Developing and Approving WECC Standards* and remove a formal definition of "Interested Stakeholders" to further open the WECC Regional Reliability Standards development process. NERC filed the necessary revisions to the WECC Delegation Agreement on July 21, 2008. These revisions were approved by FERC on December 19, 2008.

**C. *State Regional Entity's assessment of its own effectiveness in reliability standards development since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.***

WECC believes it has been very effective in the development of Regional Reliability Standards since January 1, 2007. WECC took a proactive approach to transfer eight key aspects of the RMS Agreements to Regional Reliability Standards in time to meet the effective date of 83 NERC Reliability Standards. WECC has responded to FERC's directive and approved permanent replacements to the original eight Regional Reliability Standards. WECC has also completed development and approval of the WECC ATEC standard.

WECC provides input into the NERC Reliability Standards development process. WECC staff monitors all NERC standards development activities and communicates important deadlines to Western stakeholders. WECC encourages volunteer participation from its members on all NERC Reliability Standard drafting teams. To date, representation by WECC members on NERC Reliability Standards drafting teams has been excellent. WECC staff also participates on some NERC drafting teams as members or observers.

WECC staff has triaged all projects identified in the *NERC Reliability Standards Development Plan: 2008-2010*, identifying the projects with the greatest potential impact on the Western Interconnection. As NERC Reliability Standards are posted for comment, WECC technical subgroups review the proposed Reliability Standards and provide comments. When a NERC Reliability Standard is balloted, WECC staff develops a position paper that is circulated to Western stakeholders. This paper discusses any WECC concerns identified by the technical subgroups or Western stakeholders, and how those concerns were addressed by the NERC drafting team.

**D. State any proposals of Regional Entity to improve its effectiveness in reliability standards development.**

While WECC has been effective in this area, the increased profile of compliance with reliability standards has exposed the need for additional improvements in communication and clarity of the language in the proposed reliability standards. Recognizing the increasing volume of work in the standards development area, WECC filled ½ an FTE in the Standards Department in late 2008. Adding this ½ FTE allowed the department to improve its efforts in the triage and communication of NERC standards activities, while continuing to devote the necessary resources to the regional standards development efforts.

In order to facilitate communications, WECC is in the process of a complete Web site redesign. The Standards Department will take advantage of the improvement in Web site functionality to enhance communications with entities in the Western Interconnection. The new Web site will make more information available in an easily-accessible format. The WECC Web site will have a redesigned Standards page that will include information on all Regional Reliability Standards and Regional Criteria under development. WECC will use the Web site to communicate the information from the WECC triage of the *NERC Reliability Development Plan: 2009-2011*.

WECC continues to rely on Western Interconnection volunteer support for the vast majority of WECC's participation in NERC standards development activities. Entities in the Western Interconnection have voiced their preference for volunteer participation rather than increased WECC staff to fill this role. If the volunteer pool begins to dry up, or if the preference of the entities in the Western Interconnection changes and they desire more WECC staff participation in standards development activities, WECC will propose additional positions as needed in the department.

During the public comment process, stakeholders indicated that the NERC fill-in-the-blank standards have caused confusion. WECC supports the concept of revising the standards to remove the fill-in-the-blank components. WECC will develop (as necessary) any Regional Reliability Standards that are subsequently required.

In addition, several stakeholders commented about the difficulty of participating in the standards development process owing to time and travel constraints. WECC also recognizes this is an issue for its stakeholders. WECC's standard drafting team meetings can be accessed through Adobe Acrobat Connect Pro, which allows remote participation.

**II. Organization Registration and Compliance Monitoring and Enforcement Program**

FERC approved WECC as a Regional Entity on April 19, 2007 with authority, pursuant to the Delegation Agreement between WECC and NERC to — among other things — create, monitor, and enforce standards for the reliability of the BES in the Western Interconnection.<sup>9</sup>

While mandatory reliability standards were introduced almost two years ago, 2008 was the first full year of WECC's CMEP and the program is continually improving. The effectiveness of implementing and running the CMEP is difficult to quantify in this 'start-up' period as baselines against which progress can be measured are still being

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<sup>9</sup> NERC, 119 FERC ¶ 61,060 (2006), *order on reh'g*, 120 FERC ¶ 61,260 (2007). The Delegation agreement went into effect on May 2, 2007.

established. It is expected that the 2014 NERC assessment will contain more statistically viable measures of effectiveness.

In the meantime, the only baseline WECC has relates to the effect of its comprehensive outreach program that was undertaken pre-June 18, 2007. The internal compliance reviews, undertaken by Registered Entities, that led to 3,320 self-reported violations can be attributed, to a large degree, to WECC's outreach efforts.

**A. Describe Regional Entity's activities and accomplishments in OC/CMEP since January 1, 2007. Include discussion of improvements to activities and operations since January 1, 2007.**

Compliance and enforcement activities are carried out by the WECC Compliance staff and are independent of all users, owners, and operators of the BES and from the WECC Hearings staff.

**Staffing**

WECC's Compliance Department was established at the beginning of 2007 with fewer than five employees. As of May 31, 2009 the WECC Compliance Department has 31 full-time employees:

- 12.....Compliance Program Administration
- 1.....Compliance Registration
- 3.....Compliance Auditing
- 7.....Compliance Enforcement
- 5.....Compliance Management
- 3.....Critical Infrastructure Protection (CIP)

The department has three vacancies:

- 1.....Compliance Engineer – Operations
- 1.....Compliance Engineer – Relays
- 1.....Compliance Engineer - Registration

The WECC Compliance Department also uses the services of seven contractors to address specific issues and provide overload support. Collectively, the team has significant experience in transmission and generation operations and in maintenance of the Western Interconnection. The team has several technical experts on transmission planning, transmission and power scheduling, control center operations and dispatch, vegetation management, transmission and generation protection, and cyber security.

**Registration**

As of May 31, 2009, WECC has 466 Registered Entities covering 1,248 functions. To date, 54 Western Interconnection registration disputes have been brought forward to either WECC or NERC. WECC resolved 30 of these disputes without appeal. NERC resolved one registration dispute, and one was appealed to FERC.<sup>10</sup> Eleven disputes are currently on hold. Two of these disputes are pending NERC and WECC negotiations with the entities. In addition, WECC believes that its Load Serving Entity (LSE) Distribution Provider (DP) project, described below, will bring resolution to some of these cases. Nine potential registration disputes are currently under discussion at the regional level.

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<sup>10</sup> New Harquahala Generating Co., LLC, 123 FERC ¶ 61,173 (May 16, 2008).



Total Registered Entities	466
Total Functions Registered	1,248

Total Registration Disputes	54
Disputes resolved within WECC via negotiations between compliance staff and entity	30
Appealed to NERC (WECC prevailed)	1
Appealed to NERC (WECC prevailed)/appealed to FERC (NERC prevailed)	1
NERC Appeals on-hold (NERC and WECC are working with the entities to resolve)	2
NERC Appeals on-hold (will possibly be resolved via the LSE/DP Project)	11
WECC disputes to be resolved (require more technical analysis and/or review)	9

### **Outreach**

Before mandatory standards were introduced on June 18, 2007, WECC initiated educational and outreach efforts with its members and interested stakeholders in the Western Interconnection. WECC held five workshops that were attended by a total of 780 participants, prior to the effective date of the FERC-approved Reliability Standards. These early efforts led to the development of the WECC Compliance User Group (CUG). Establishing the CUG provided a forum in which WECC could discuss its Compliance Program and trends. WECC Compliance staff augments CUG meetings by hosting monthly “Open Mic” calls where more immediate issues can be discussed and Registered Entities can ask pressing questions. Prior to May 31, 2009, WECC hosted six CUG meetings that were attended by a total of 1435 participants.

In April 2008, WECC expanded its outreach program when it established the Critical Infrastructure Protection User Group (CIPUG). The creation of the CIPUG provided a forum for sharing specific information about compliance with the Critical Infrastructure Protection Standards. Since then, approximately 1200 participants have attended eight CIPUG workshops.

While WECC has pursued a policy of outreach, members and Registered Entities have raised concerns about the lack of specific information regarding compliance findings, sufficiency of evidence, interpretation of standards, and best practices. WECC, however, concluded that it could not respond to such inquiries due to confidentiality restrictions. In response to the situation, several Registered Entities established the Western Interconnection Compliance Forum (WICF) to share knowledge and lessons learned regarding compliance matters, and to collectively develop best practices. While WICF is not affiliated with WECC, WECC has supported the creation of WICF by providing a venue for meetings held concurrently with the CUG and CIPUG. WECC Compliance staff does not attend these meetings unless expressly invited. Recommendations and suggestions developed by WICF and pertaining to WECC’s CMEP are presented to WECC’s Compliance Management via the WICF Steering Committee.

In August 2008, the WECC Board recognized the need for a Board-level interface with WICF. Tim Newton, a WECC Non-Affiliated Director, agreed to serve as the WECC Board Liaison to WICF. Mr. Newton and the WICF Chair each provide an update about WICF at each WECC Board meeting. This update provides an additional perspective to the Board members.

In recognition of the need for a dedicated line of communication between WECC and its stakeholders, in October 2008 WECC appointed Taud Olsen as Director of Stakeholder Relations and Compliance Outreach. Mr. Olsen manages WECC's compliance outreach and compliance training programs. The position works closely with WECC Compliance staff but reports directly to WECC's Chief Executive Officer.

### Web Portal

During 2008, the WECC Compliance Department developed a new compliance Web site and Web portal for the submittal of compliance data. A two-month transition period began on August 1, 2008 and allowed entities to submit their compliance data via the Web portal or via the traditional process. The Web portal "went live" on October 1, 2008. Since then, all compliance data submittals have been made via the Web portal. In preparation for this, the WECC team conducted seven portal training workshops for Registered Entities.

### Compliance Monitoring Processes

Since January 1, 2007, WECC has been growing into its expanded role implementing the FERC-approved CMEP. WECC is the largest of the eight Regional Entities in terms of the geographic area covered, the number of Registered Entities, and the number of Registered Functions. The sheer magnitude of the compliance and enforcement workload generated since the mandatory penalty and sanction period began has, at times, exceeded the WECC Compliance staff's workload capacity. This was due, in part, to the volume of self-reported violations.

WECC views its outreach efforts as a success in that it led to a broad industry effort to self-evaluate compliance. WECC received 3,320 self-reported possible violations prior to the effective date of the FERC mandatory standards on June 18, 2007. WECC received an additional 1,291 after June 18, 2007. This accounts for approximately 88.9 percent of the possible violations processed by WECC. Following a review, WECC determined that more than 1,500 of the self-reported violations were erroneous and were subsequently dismissed or retracted. Of the pre-June 18, 2007 self-reported violations, 211 have led to enforceable violations due to incomplete or untimely completion of mitigation efforts. WECC is still processing 28 (0.8 percent) of these self-reported violations.

### VIOLATIONS IDENTIFIED THROUGH COMPLIANCE MONITORING PROCESSES

Monitoring Process	Pre		Post		Total	
	#	%	#	%	#	%
Compliance Audit	28	0.8%	289	15.7%	317	6.1%
Exception Reporting	0	0.0%	25	1.4%	25	0.5%
Investigation	0	0.0%	0*	0.0%	0	0.0%
Periodic Data Submittals	10	0.3%	5	0.3%	15	0.3%
Self-Certification	1	0.0%	214	11.6%	215	4.1%
Self-Report	3,320	98.8%	1,291	70.3%	4,611	88.7%
Spot Checking	0	0.0%	13	0.7%	13	0.3%
Complaints	0	0.0%	0	0.0%	0	0.0%
Total Violations	3,359	100.0%	1,837	100.0%	5,196	100.0%

(\*) Three violations initially discovered by Self-Report and Compliance Audit were confirmed after an Investigation.

## STATUS OF VIOLATIONS

	Pre June 18	Post June 18	Total YTD
Total Possible Violations Reviewed	3,359	1,837	5,196
Total Dismissed Violations	1,549*	727	2,276
Total Enforceable Violations	0	1,110	1,110
Total Mitigated Violations	1,782	781	2,571
Total Notices of Alleged Violation and Proposed Penalty or Sanction **	n/a	669	669
Total Notices of Confirmed Violations **	n/a	178	178

(\*) Includes 211 Pre-June Violations moved to Post-June due to completed Mitigation Plan rejected or past due submission.

(\*\*) Number of Violations

Between January 1, 2007 and December 31, 2008, WECC participated in 90 audits: 60 off-site and 30 on-site. Of the 30 on-site audits, 23 were conducted by WECC, three were co-conducted by WECC and the SERC Reliability Corporation, one was co-conducted by WECC and the Midwest Reliability Organization, and the remaining three were conducted by NERC. Of the 23 on-site audits conducted by WECC, 21 on-site reports have been finalized. The remaining two were conducted by WECC prior to June 18, 2007 and do not require a report.

Of the 2007-2008 60 off-site audits, WECC has finalized all 60 audit reports. On the completion of each audit WECC reviews its process and procedures. This process of continuous improvement has enhanced the consistency, efficiency, and efficacy of WECC's audit process.

	On Site	Off Site	Total 2007-2008
Total Audits Scheduled	30	60	90
Total Audits Conducted by Other Organizations	7	-	7
Total Audits Conducted by WECC	23*	60	83
Audit Reports Sent to NERC	21	60	81
Audit Reports Drafted in Review	-	-	-
Total Possible Violations Identified	219	62	281

(\*) Two audits were conducted prior June 18, 2007 and do not require a report.

Since January 1, 2009, WECC has conducted 50 audits: six on-site and 44 off-site. Of the six on-site audits, two non-public audit reports have been finalized. The remaining four non-public audit reports and six public audit reports are being drafted or have been sent to the Registered Entity for review. Of the 44 off-site audits, 11 non-public audit reports and 11 public audit reports have been finalized. 33 non-public audit reports and 33 public audit reports are being drafted or have been sent to the registered entity for review.

The 140 audits have identified a total of 289 possible violations of reliability standards.

Since January 1, 2007, WECC has conducted 278 spot-checks and processed 745 Registered Entity self-certifications. These two monitoring processes combined have uncovered an additional 227 possible violations.

To date, WECC has initiated seven formal Compliance Violation Investigations (CVIs). Three are complete and the reports have been finalized. Three are open. The remaining investigation has been assumed by NERC pursuant to Section 3.4 of the CMEP. Accordingly, WECC has ceased its activity relative to this remaining CVI and considers this investigation closed as a WECC CVI. Of the six CVIs WECC has conducted, two were related to vegetation issues (FAC-003) resulting in possible violations, and two were related to transmission protection issues (PRC-005) with one resulting in a possible violation and one finding no violation. One CVI dealt with a metering concern (BAL-005) and WECC found no violation. NERC notified WECC on January 23, 2009 of their rejection of WECC's findings and this issue is currently open. The sixth CVI is ongoing. WECC Compliance staff has reviewed other system events to determine whether a CVI was warranted but found no need to initiate an investigation in any other instance.

### **Mitigation Plans**

WECC has reviewed mitigation plans covering 4,989 violations. WECC staff has approved mitigation plans for 4,668 violations. Registered Entities have submitted certifications of completed mitigation plans for 3,580 violations. WECC has reviewed 99 percent of the certifications, corresponding to 3,545 violations. Of the 3,545 violations with certifications, WECC rejected 214 due to lack of evidence or incompleteness. An additional 35 violations with certifications are still in the review process.

Of the 4,989 violations with mitigations plans approved by WECC, 211 relating to pre-June 18, 2007 self-reported violations are now subject to sanctions due to the Registered Entity's failure to complete compliance activities. Of these 211 violations, 32 violations with mitigation plans remain open as of May 31, 2009.

Number of Violations with:	Pre June 18	Post June 18	Total YTD
Mitigation Plans Submitted	3,345	1,644	4,989
Mitigation Plans Accepted and Approved	3,167	1,501	4,668
Mitigation Plans Certified as Completed	2,396	1,184	3,580
Mitigation Plans Verified as Completed	1,939	1,005	2,944

### **Notice of Alleged Violation and Proposed Penalty or Sanction (NAVAPS)**

Following review of all possible violations identified through the eight processes specified in the WECC CMEP, WECC may issue a NAVAPS if it determines that there is sufficient evidence to support an alleged violation. As of May 31, 2009, WECC has issued NAVAPS to Registered Entities covering 669 violations.

WECC is issuing NAVAPS to Registered Entities that self-reported violations prior to June 18, 2007 in cases where there are subsequent issues with the entity's progress toward compliance under its mitigation plans (pre-to-post violations). As of May 31, 2009, WECC has issued NAVAPS for 201 pre-June 18, 2007 self-reported violations

In addition to the pre-June 18, 2007 self-reported violations, WECC identified a total of 1,837 violations occurring after June 18, 2007. Registered Entities self-reported 1,291 violations (70 percent). Following review, WECC dismissed 591 of the self-reported violations due to the lack of substantiating evidence that a violation existed. Of the 700 remaining violations, WECC has issued NAVAPS corresponding to 316 self-reported violations.

### **Notice of Confirmed Violations (NOCV)**

Subsequent to a Registered Entity's acceptance of the determinations set forth in the NAVAPS, an NOCV is issued. As of May 31, 2009, WECC has issued NOCVs for 178 violations.

### **Settlements and Hearings**

To date, 25 Registered Entities have settled in principle with WECC a total of 262 violations. WECC has not held nor scheduled hearings on any alleged compliance violations. Five of the Registered Entities that have disputed findings in their NAVAPS have deferred hearings during settlement discussions.

## ***B. Describe how the Regional Entity has the ability to enforce reliability standards and to provide for an adequate level of bulk power system reliability in its Region.***

WECC's authority to enforce reliability standards is based on the authority granted in its Delegation Agreement with NERC. FERC's approval of the Delegation Agreement conferred authority to WECC to manage and enforce compliance with FERC-approved reliability standards and to apply penalties up to the extent of FERC's civil penalty authority. Additionally, WECC develops Regional Criteria and practices to improve the functioning and efficiency of the Western Interconnection. This combination provides a forum for addressing system-wide issues and an oversight role to promote the reliable operation of the Western Interconnection.

### **Governance**

WECC has a hybrid Board of Directors,<sup>11</sup> including both Non-affiliated Directors and a balanced group of Stakeholder Directors. The WECC Board has delegated the implementation of the CMEP to the WECC Compliance staff. At its meeting in April 2009, the WECC Board voted to form a Compliance Committee and approved its charter. The WECC Compliance Committee charter provides that the committee will assist the Board in providing oversight of WECC's compliance function and a forum for communication between the compliance function and the WECC Board.

### **Funding**

During this period of growth, the WECC Compliance Department has received substantial support from the WECC Board. Since 2006, the WECC Board has approved budget increases to implement the CMEP. In both 2007 and 2008, the WECC Board also approved two mid-year spending increases for the WECC Compliance Department, recognizing the difficulties associated with implementing new compliance enforcement efforts. The 2009 Compliance Department budget increased by 35 percent when compared to the 2008 budget.

### **Process and Training**

WECC has created and implemented an audit program designed around the required three- and six-year audit cycles and, with the exception of two on-site and eleven off-site audits, remains on schedule with this plan. WECC also uses the

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<sup>11</sup> Federal Power Act Section 215(e)(4), 16 U.S.C. ¶ 824o(e)(4) (2005).

complete list of NERC-approved Actively Monitored Standards and Requirements as a minimum audit scope. WECC requires all auditors to complete the NERC-required training classes for auditors. In addition, all compliance staff members are encouraged to undertake the same training so that they have a general understanding of the significance of the auditing process.

### **Coordination**

WECC fully participates in multi-region forums to share information related to best practices for the successful implementation of compliance auditing and enforcement. These include the Regional Entity Compliance Implementation Group (RCIG) and its associated working groups, and the Organization Registration and Certification Subcommittee. The RCIG's main purpose is to foster cooperation and coordination, and to improve consistency among the regions. The RCIG directs the activity of its working groups. WECC also participates in the Regional Entities Management Group whose members are chief executives of each Region and oversee all program areas including compliance and standards development.

### **C. Describe how the Regional Entity has fair and impartial procedures for enforcing reliability standards**

WECC's Delegation Agreement with NERC is based on the NERC *pro forma* Delegation Agreement and has been reviewed and approved by FERC. The WECC Compliance Department is required by the *WECC CMEP* to develop an *Annual CMEP Implementation Plan*. The plan identifies the NERC Reliability Standards and WECC Regional Reliability Standards that will be monitored during the program year, as well as the compliance monitoring methods that will be used to enforce reliability in the Western Interconnection. This plan is submitted to NERC for approval.

The WECC Compliance Department goals for implementing the WECC CMEP are:

- **Improve Reliability for the Western Interconnection** – Reliability in the Western Interconnection will be maintained or improved through compliance with the Reliability Standards. Registered Entities with pro-active internal compliance programs help ensure the goal of reliability.
- **Transparency** – Implementation of the WECC CMEP will be transparent across all Registered Entities within the Western Interconnection. The WECC Compliance Department is working on several projects to ensure transparency for Registered Entities that operate in multiple regions. These projects include a Web portal that six other regions and NERC are also implementing, and the development of a common regional Web site.
- **Consistency** – All monitoring and enforcement activities within WECC will be fair and consistent. To achieve this, all WECC Compliance staff undergo rigorous CMEP training. In addition, several processes within the compliance function have been standardized. Additionally, WECC participates with all other regions in several compliance working groups to develop better practices and commonality across the United States.
- **Professionalism** – The WECC Compliance Department employs a staff that is highly experienced and knowledgeable. Its staff members are committed to presenting the highest caliber of professionalism.
- **Communications** – WECC is committed to pursuing a path of continuous improvement in communications with all stakeholders in the Western Interconnection.

WECC follows the procedures in the CMEP, the NERC Rules of Procedure, and the FERC regulations. The procedures provide for an initial review via one of eight

methods: (1) compliance audit; (2) compliance violation investigation; (3) spot check; (4) annual self-certification; (5) self-reports; (6) periodic data submittals; (7) exception reporting; or (8) complaint. The processes for each method of initial review are outlined in the CMEP. Once a possible violation is identified, the WECC Compliance Department reviews the findings to determine whether there is sufficient evidence to allege a violation and determines the appropriate remedial actions, penalties, and sanctions under the NERC Sanction Guidelines. WECC's enforcement activities are governed by NERC's annual Compliance Monitoring and Enforcement Program Implementation Plan, and by WECC's Regional Entity Implementation Plan.

Once the WECC Compliance Department issues a NAVAPS, the Registered Entity has the right to request a hearing before a WECC Hearing Panel. Hearing Panels consist of either three or five members, and are selected from the WECC Compliance Hearing Body. The majority of members of any Hearing Panel must be either WECC Non-affiliated Directors, personnel employed by WECC members who are not engaged in the electric line of business, or consultants who meet the same standards of independence required by the WECC Bylaws for non-affiliated directors. A Registered Entity also has the right to request additional appeals to NERC and FERC.

WECC Compliance management has hired as auditors, engineers and contractors who have several years of documented experience and expertise in the reliability standards subject matter areas. Each auditor must complete the NERC auditor training program. The combination of auditor training and subject matter expertise assures that all compliance monitoring activities are completed with technical accuracy, consistency, and thoroughness. Each group of reliability standards (e.g., Resource and Demand Balancing (BAL), Communications (COM), Critical Infrastructure Protection (CIP)) has a lead subject matter expert and a specified alternate. In addition, a team — typically three or four additional subject matter experts — assists in compliance monitoring processes. All compliance monitoring process activities are assigned based on the reliability standards to be reviewed. Team members are selected and assignments made based on their documented subject matter areas.

Once the audit team determines that a possible violation exists, WECC's enforcement staff reviews the documentation to determine whether the possible violation should be considered an alleged violation and a Preliminary Notice of Alleged Violation issued. This process provides multiple reviews to ensure fair and impartial enforcement of reliability standards.

All WECC employees and consultants must identify all potential relationships or conflicts with market participants or registered entities and sign a conflict of interest form, verifying their compliance with WECC's Code of Conduct.

WECC follows the CMEP requirements and provides biographies of all potential auditors prior to an audit to allow the entity being audited to review the biographies and object to any potential or perceived conflicts that could impair fairness or impartiality. WECC also internally bars any employee from any compliance work related to an entity with which they have had a relationship, for at least a one-year separation period.

At the end of every audit, WECC provides the audited entity a copy of the NERC Questionnaire. This is to allow the audited entity to directly report to NERC any

concerns with fairness, objectivity, or balance; in addition to other quality measures, with respect to how WECC carries out its auditing function.

WECC is registered as a Reliability Coordinator and an Interchange Authority. In order to maintain fair and impartial compliance monitoring for WECC-registered functions, WECC entered into the “*Agreement Between the North American Electric Reliability Corporation and Western Electricity Coordinating Council Concerning Compliance Monitoring and Enforcement for WECC Registered Functions*”<sup>12</sup> with NERC. This agreement gives the compliance monitoring of WECC-registered functions to NERC.

***D. State Regional Entity’s assessment of its own effectiveness in OC/CMEP since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.***

Overall, WECC has been very effective in its primary goal of increasing reliability in the Western Interconnection. WECC’s outreach programs communicated the need for industry action prior to the effective date of the FERC-approved reliability standards. This resulted in a “tidal wave” of self-reported violations and subsequent mitigation plans. Although this created documentation and reporting backlogs for WECC, it has resulted in increased understanding of the requirements of the reliability standards and attention to compliance within the industry.

**Outreach**

As discussed earlier, WECC’s outreach program has been very successful. While room for improvement exists, WECC continues to hold meetings of the CUG and CIPUG. The meetings provide a forum to convey information on compliance monitoring and enforcement, and to receive feedback on issues being faced by the industry.

**Registration**

Relative to the number of Registered Entities in the Western Interconnection, WECC has had few registration disputes. However, registration disputes continue to be a concern due to the fundamental issue of whether individual facilities have a material impact on the BES.

In December 2008, the WECC Board directed WECC staff to notify NERC that it has not, and will not, use the nine criteria associated with the definition of the Bulk Electric System. The WECC Board tasked WECC’s Reliability Policy Issues Committee (RPIC) to determine a plan to develop a regional clarification to the NERC definition. At its February 2009 meeting, RPIC determined that, although this clarification is not a standard or regional criterion, it would follow the formal standards development process to produce the regional clarification. It is anticipated that this process should be completed by year-end.

In WECC’s opinion, registration-by-requirement provides a solution to many registration disputes and can lead to more efficient implementation of compliance efforts within the industry. WECC initiated a “Registration-by-Requirement” project designed to clearly define in advance which standards and requirements are applicable to smaller LSEs and DPs within the Western Interconnection. The project was developed primarily to assist small LSEs and DPs in their compliance efforts by

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<sup>12</sup> Effective January 1, 2009. Approved by FERC Letter Order issued February 17, 2009 Docket Nos. RR06-1-018, RR07-7-006.



identifying the standards and requirements that are applicable to their operations. WECC is no longer referring to this project as a "Registration-By-Requirement" but is instead referring to it as an "Agreement On Compliance Obligations" since it will not result in an official change in registration at NERC. This project also will assist WECC in its compliance activities by identifying requirements that are subject to compliance monitoring for a specific Registered Entity. FERC adopted a similar approach in its decision regarding the New Harquahala Generating Company, LLC registration dispute.

### **Compliance Monitoring Processes**

WECC's CMEP process implementation effectiveness has been adversely affected by the sheer volume of possible violations it has received for processing since January 1, 2007. WECC must review each self-reported violation, mitigation plan, and certification of a completed mitigation plan. The requirement to provide updates on each possible violation, alleged violation, proposed penalty, and settlement to NERC necessitates the production of a substantial amount of documentation. This huge workload, and its corresponding backlog of processing, has resulted in lengthy delays in the review of violations and mitigation plans. WECC's first priority is keeping current on new violations as they are reported or discovered through the compliance monitoring process. In addition, WECC has focused its engineering and audit resources on the highest priority work and cleared the minor technical violations (having little to no impact on the reliability of the system) with limited review.

WECC's accelerated compliance backlog-reduction initiative is progressing. The audits, spot-checks, and CVIs WECC has conducted have been extremely effective in uncovering possible violations of NERC reliability standards. WECC is working with the responsible registered entities to mitigate those violations.

WECC has also improved the effectiveness of its audit process since the initial audits in 2007. WECC addressed several issues related to consistency and the application of specific reliability standard language. Consequently, WECC's audits continue to improve with more focused reviews of reliability issues. These improvements have carried over to the CVI process.

### ***E. State any proposals of Regional Entity to improve its effectiveness in OC/CMEP.***

2008 was the first full-year of compliance monitoring and enforcement at WECC. As the program is evolving, baselines are being established against which future progress can be measured. Without a baseline, no Regional Entity can gauge its true effectiveness in the implementation of its compliance program. WECC does continue to improve its efficiency in the implementation of the CMEP and has begun several initiatives to accomplish the procedural improvements necessary during the growth period. Most notable are the identification and use of lead subject matter experts for each of the NERC reliability standard groups, the assignment of process managers for each of the compliance monitoring processes, and the detailed and thorough review and process mapping of all of WECC's internal compliance activities and work products. Each of these actions is helping to assure consistency and effectiveness in WECC's monitoring approach and supports the outreach and education of its registered entities.

Registration disputes and investigations have absorbed an extraordinary amount of resources due to the number of disputes and investigations, and the associated complexities of each case. WECC continues to process its backlog of enforcement

activities. Some specific actions taken to reduce this backlog include a recent departmental reorganization, the recruitment of staff with regulatory experience, a focus on processing new violations in a timely manner, and the prioritization of older backlogged violations relative to their potential impact on the BES. In addition, to expedite enforcement, WECC has joined forces with other Regional Entities – through a consortium agreement – to automate certain document submittal and other resources. WECC has also contracted with an outside vendor to provide internal automation and process improvements.

WECC analyzed comments received through the public comment process on its *“Statement of Activities and Accomplishments in Carrying out its Delegated Responsibilities for the Period January 1, 2007 through December 31, 2008.”* Consistent themes related to WECC’s compliance activities were identified through the feedback.

### **1. Timeliness, consistency, and accuracy of WECC responses**

Stakeholders indicated that timeliness of identifying possible violations, processing violations, concluding investigations, and staff responses to requests for information were a concern.

Organizational changes to the compliance program in 2009 have improved both the accuracy and timeliness of WECC’s CMEP activities. Specifically, staff with extensive regulatory experience have been recruited and the department has been restructured to maximize the effectiveness of its resources and facilitate the use of cross-functional teams. WECC is working with NERC and FERC to clear the backlog of numerous cases pending as a result of self-reports that pose little or no risk to reliability. . In addition, internal performance metrics have been established, and are monitored and reported to management on a monthly basis. This process assures the appropriate level of management focus and that positive trends are perpetuated and negative trends are addressed expediently.

### **2. Lack of clear direction from WECC (and NERC)**

Stakeholder feedback indicates concern about the lack of consistency in audit processes. Additionally, many stated that some reliability standards were difficult to understand and therefore difficult for entities to ensure their compliance.

WECC is currently examining its process for writing audit reports to better describe the linkage between the standard and the violation. The use of cross-functional audit teams has been tested and, based on the success of those tests, the department has been reorganized as reflected in the discussion above. WECC will continue to incorporate any changes arising from new guidance received from FERC and NERC into its process and will communicate those changes to registered entities where appropriate. In order to provide more clarity about the interpretation of standards, WECC plans to continue its targeted training outreach. The department tracks trends in the most commonly violated standards and develops targeted training for registered entities on these standards.

### **3. Submittal and handling of compliance information**

While WECC’s compliance portal received positive feedback, stakeholders indicated that WECC needs to provide better tools for the submission and handling of compliance information.

Efforts are underway to implement a Compliance Issues Tracking System (CITS) by the third quarter of 2009. This system will track violations through the entire

life cycle of a violation and will automate processes. In addition to the CITS implementation, WECC is researching document management system software and plans to implement a system by the end of the year.

#### **4. Registration process**

Stakeholders indicated the need for more clarity around registration criteria.

WECC consistently uses the “NERC Statement of Compliance Registry Criteria” to determine the registration requirements of entities. In addition, WECC has utilized additional resources from time-to-time to assist in the registration process. Entities continue to challenge whether they are subject to registration due to their size, their interpretation of the Registry Criteria, or whether they have a material impact on the BES. WECC has a number of disputes that need to be resolved. WECC plans to identify ways to improve its communication with entities and to strengthen its outreach and education on this issue.

WECC has dedicated a substantial amount of time and resources to assisting entities in their compliance efforts by attempting to narrow and clarify the scope of their registration up-front. For example, as discussed in Section D, WECC developed its “Agreement On Compliance Obligations” project to assist small LSEs and DPs in their compliance efforts by identifying the standards and requirements that are applicable to their operations. In addition a number of Generator Owners/Generator Operators that have been registered as Transmission Owners (TO)/Transmission Operators (TOP) are requesting negotiations in an attempt to appropriately limit the scope of requirements applicable to them under their TO/TOP functions based on the nature of the transmission facilities they operate. WECC notes that it is difficult to address disputes based on the lack of material impact since the definition of “Material Impact” is highly subjective and the industry has not yet developed a consensus definition. WECC anxiously awaits guidance from NERC or FERC and supports efforts to resolve some of these issues.

#### **5. Training and Education**

While stakeholders indicated an appreciation of WECC’s external training program, they expressed a desire for more training and education. In addition, stakeholders expressed the belief that WECC Compliance staff requires internal training.

As the CMEP continues to ramp up, both WECC and the Registered Entities continue to add staff who may require introductory and more advanced training. WECC will continue to improve and expand its internal training program and institute a more formal process for training; both externally and internally. WECC will continue its outreach efforts, including workshops and targeted training programs, with consideration for many smaller stakeholders with limited travel budgets. In addition, WECC plans to build on the success of the Webinar training that was undertaken prior to the launch of the compliance portal and will consider how to expand the use of that medium to those entities that are unable to attend training in-person.

WECC received some compliance-related comments associated with the discussion of its backlog clearance activities and organization registration contained in its *“Statement of Activities and Accomplishments in Carrying out its Delegated Responsibilities for the Period January 1, 2007 through February 28, 2009.”* This version was posted for public comment until May 29, 2009.

The Edison Electric Institute expressed a desire for clarification about the actions taken by both NERC and WECC to reduce the volume of outstanding cases in the WECC region. Both NERC and WECC are constrained by existing CMEP rules that prevent the disclosure of information regarding violations until FERC has made its final ruling on any enforcement actions. The problem is compounded by the limited number of cases that have reached this final stage when information can be disclosed. Consequently, other than describing the efforts being undertaken in general terms there is little public information that can be shared with Registered Entities and the public in this self-assessment and other documents. As roles and expectations are more clearly defined by NERC, and with increased experience in the investigation of violations, the time needed to complete enforcement activities is beginning to decrease. As a result, WECC is experiencing increasing success at moving cases through due process and filing the results with NERC.

WECC is working, both internally and with NERC, to reduce the backlog of cases and is making progress. Some of the specific actions that have been and are being taken include:

- Reorganize the Compliance Department to maximize the effectiveness of the department's resources and facilitate the use of cross-functional teams.
- Recruit more staff with regulatory experience.
- Process new violations promptly and keep current.
- Prioritize older, backlogged violations: those representing possible higher risk to reliability are being processed first.

As newer violations are processed with respect to any Registered Entity through settlement agreements, older violations attributed to that Entity that are in the backlog are added and dealt with in one settlement.

The American Public Power Association (APPA) comments (C.6) on the need to *"Reduce the [Regional Entity] time lag in processing mitigation plans associated with self-reported violations. Particularly within WECC...."*

WECC agrees that entities need prompt feedback on mitigation plans. In an effort to resolve its backlog issues, and after consultation and guidance from NERC staff, WECC focused initially on processing alleged violations identified at audit and those that represent greater risk to reliability. Consequently, fewer resources were available to processing some mitigation plans. WECC is in the process of hiring more auditors and support staff and internally clarifying responsibility for mitigation plans.

WECC believes that when staff is fully in place and trained, mitigation plans will be processed in a timely manner. WECC continues to gain more understanding of NERC's expectations and requirements as NERC reviews submitted mitigation plans and requests modifications. A concerted effort is underway to work with entities to resolve these issues. Recently, FERC approved revisions to NERC's pro forma Compliance Monitoring and Enforcement Program that should speed entity notification of NERC action on mitigation plans.<sup>13</sup> These revisions, as interpreted by FERC, require NERC to notify both the registered entity and the regional entity directly, and contemporaneously, within 30 days as to whether NERC approves the mitigation plan.<sup>14</sup>

In its public comment, the Bonneville Power Administration (BPA) supports the development of a process by which Registered Entities can, "submit hypothetical or

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<sup>13</sup> *Order on Compliance Filing*, Docket No. RR06-1-021, 127 FERC ¶61,209, June 1, 2009.

<sup>14</sup> *Id.* at 17.

proposed means of complying and demonstrating compliance with particular standards for review and guidance by NERC and WECC."

WECC agrees that there is a need for entities to have more certainty on compliance with standards. As discussed earlier, as more entities receive final rulings from FERC, more information about "lessons learned" will be made available that will serve as a guide to both the Registered Entities and the Regional Entities. As noted by some commenters, other agencies offer similar processes that should be considered. While this would be resource-intensive for NERC and the Regional Entities, WECC supports and encourages any effort to provide more guidance and certainty; whether through the process BPA proposes or an alternative solution.

### **Organization Registration and Certification**

The APPA comments (B.1) on the need to "*Raise threshold criteria for requiring entities to be registered.*"

WECC concurs that "NERC and industry stakeholders need to develop workable procedures and engineering criteria for the study and evaluation of material impact...." A large number of public power and other Registered Entities ranging from very small to medium-sized exist within the WECC region. In many cases, these entities, viewed individually, may have little or no material impact on BES reliability. However, in the aggregate, these same entities appear to have a significant impact. WECC interprets the current NERC Statement of Compliance Registry Criteria to require registration of these entities because of their possible aggregate impact. WECC believes it would be useful for NERC to re-examine this issue and clarify what, if any, registration is required based on aggregate impact, or whether some alternative could preserve reliability while not requiring registration of an entity which, taken by itself, has little or no impact on the reliability of the BES.

The APPA comments (B.2) on the need to "*Allow registration by requirement.*"

As the APPA notes in its comments, WECC has been working with certain small-to-medium-sized LSEs and DPs in the WECC region to identify the requirements with which those entities must demonstrate compliance.<sup>15</sup> WECC agrees with the APPA's comments that altering the current approach to registering small-to-medium-sized entities might offer benefits. Currently, when these entities are audited, WECC auditors examine all the standards and all of the requirements associated with each function for which an entity is registered. This practice usually results in a number of requirements being determined as "not applicable" and thus are not audited further. With respect to smaller entities registered for the LSE and DP functions, a significant amount of WECC and the entity's time and resources are devoted to this examination.

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<sup>15</sup> Subsequent to FERC's *Harquahala* order in Docket No. RC08-4, 123 FERC ¶61,173, WECC began exploring registration by requirement for certain small-to-medium public power LSEs and DPs in order to resolve a number of registration disputes. Informal guidance from NERC staff communicated to WECC emphasizes that NERC is not bound by any such agreements. Entities are being advised of this, and also that WECC may not be bound if, for example, WECC identifies changes in circumstance or practices or, during an audit, identifies additional requirements for which the entity should be held responsible and accountable.

The registration-by-requirement<sup>16</sup> analysis is conducted by WECC at the request of the entity. This analysis reviews the entity's operations and equipment to determine which requirements do not apply. WECC requires that these entities promptly report any changes that may alter the applicable requirements. Registration-by-requirement benefits the entity by identifying applicable requirements in advance of audit and compliance monitoring activities. This process also helps auditors and the WECC Compliance Department to focus on the requirements that will be monitored and examined.

**Conclusion:**

In conclusion WECC appreciated the comments and will, as noted above, act on them. Respondents also commented particularly favorably on the Compliance outreach program, on WECC's CIP expertise, and on WECC's compliance portal.

### III. Other Program Areas

#### A. Reliability Readiness Evaluation and Improvement Program

"Readiness Evaluation" is a NERC program designed to assess an entity's ability to operate reliably in the future as well as to determine its readiness to maintain safe and reliable operations. Readiness Evaluations are undertaken by teams of industry experts and generate examples of excellence that are circulated throughout the industry to improve operations. Balancing Authorities, Transmission Operators, and Reliability Coordinators are scheduled for Readiness Evaluations every three years.

Readiness Evaluations are conducted at entities' facilities, and involve reviews of documentation and interviews with employees. On completion of an evaluation, the team meets with the entity's staff and management personnel, provides details of good operating practices, and makes recommendations for improvement. Recommendations from Readiness Evaluations in WECC are tracked for resolution by the Operating Practices Subcommittee, which is a subgroup of the Operating Committee.

Readiness Evaluation teams consist of six or more members including: a WECC staff member, a NERC co-lead, and four industry volunteers drawn from both inside and outside of the Western Interconnection. FERC staff also may participate. WECC's Readiness Evaluation staff ensures that the evaluation team understands operating practices and WECC members are well-prepared for the evaluations. The readiness evaluation program in WECC is under the direction of the assistant director of operations.

**1. Describe Regional Entity's activities and accomplishments in Reliability Readiness Evaluation and Improvement since January 1, 2007, including discussion of improvements in this area.**

WECC and NERC co-conducted 33 Readiness Evaluations from January 1, 2007– May 31, 2009. During this 29-month period, 24 Balancing Authorities, three Reliability Coordination Offices, and six Transmission Operators participated in the program. As of the date of this report, all but three of the

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<sup>16</sup>Although WECC uses the term "Registration-by-Requirement" in these comments, it is noted that this term is not recognized by NERC. Based on informal guidance from NERC, WECC no longer uses this terminology. Instead, WECC uses the term "Agreement on Compliance Obligations" to refer to such agreements.

evaluations have final reports posted. From these reports, 266 positive observations, 261 recommendations, and 13 potential examples of excellence were identified. Of the 261 recommendations, 137 have been resolved. Some recommendations appeared more frequently than others; those related to Operator Training, Advanced Applications, Document Management, and Load Shed Procedures.

In July 2008, the NERC Board of Trustees approved a plan to eliminate the Readiness Evaluation Program by the end of the first quarter of 2009.<sup>17</sup> As a result of this decision, two Readiness Evaluations that were scheduled for completion in 2008 were canceled. These entities had previously participated in Readiness Evaluations and had no outstanding recommendations. Three Transmission Operators were scheduled to receive Readiness Evaluations before the end of the first quarter of 2009. These entities have not previously had a Readiness Evaluation. These evaluations serve as a Provisional TOP Certification Process. One of these evaluations occurred October 28–31, 2008. The remaining two were completed in February 2009.

**2. *State Regional Entity's assessment of its own effectiveness in Reliability Readiness Evaluation and Improvement since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.***

As Readiness Evaluation Recommendations are not mandatory, some entities have chosen not to implement the recommendations for various reasons (such as, budget constraints and management discretion). The majority of WECC entities that received Readiness Evaluation Recommendations since January 1, 2007 have indicated that the implementation of the recommendations has led to an overall improvement of their operations. In some instances, entities have slightly modified recommendations to better meet their operating processes and practices, and to make them more appropriate to the size and scale of their organizations. Overall, when recommendations are implemented (such as the formalization of shift change procedures, document control, or operating procedures), WECC members have indicated the result was an improvement in their operations.

## **B. Training, Education and Operator Certification**

WECC provides continuing education and training for system operators, schedulers, and dispatchers. The costs associated with the WECC Training Program are completely offset by the revenue generated from registration fees for the training classes. WECC conducts training classes 24-26 weeks per year in Salt Lake City, Utah. Since 2008 and continuing in 2009, training classes have been held in Salt Lake City, Utah; Spokane, Washington; Wilsonville, Oregon; Phoenix, Arizona, and San Ramon, California. The curriculum is developed with the assistance of the Operations Training Subcommittee of the Operating Committee. The Operations Training Subcommittee and WECC staff provide an annual System Operator Training Program for all WECC-certified training instructors. In addition, twice a year

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<sup>17</sup> FERC has questioned NERC's proposed elimination of the Readiness Evaluations. NERC, 125 FERC ¶ 61,056 (October 16, 2008) ("Accordingly, the ERO may not unilaterally eliminate a Commission-approved program such as the Reliability Readiness Evaluation and Improvement Program or eliminate (or intentionally lay dormant) section 700 of the NERC Rules of Procedure. Rather, to be in compliance with the Commission's regulations and relevant orders, the ERO must petition the Commission and gain Commission approval before eliminating the program or amending the Rules of Procedure.")

WECC staff and the Operations Training Subcommittee offer an *Overview of Systems Operations Workshop* that provides a broad overview of system operations for non-operational personnel.

**1. Describe Regional Entity's activities and accomplishments in Training, Education and Operator Certification since January 1, 2007, including discussion of improvements in this area.**

Between January 1, 2007 and May 31, 2009, WECC provided training to 1,891 of its members' employees through the System Operator Training Program. WECC also provided training to 470 non-operational personnel of WECC member systems and various state regulatory agencies through the Overview Workshops during this period.

WECC provides continuing education for system operators, schedulers, and dispatchers. As part of its ongoing improvement process, WECC reviews and revises the curriculum based on feedback from students and on changes in the entities' operating environment. As a consequence of this feedback, WECC has increased the emphasis on training related to NERC Reliability Standards, Regional Reliability Standards and Criteria, and business practices.

In 2009, all of the System Operator Training Modules were modified to increase the emphasis on NERC and Regional Reliability Standards as well as incorporation of additional simulation training. The following are the revised courses showing the discussion topics and a breakdown of the continuing education hours earned for each module. These revised courses are being used in the 2009 Training Program.

**Generation Resources Control and Balance**

This week-long class focuses on the control and balance of generation resources. On completion, each student receives 30 NERC continuing education (CE) hours, with six NERC CE hours of NERC Standards and eight NERC CE hours of simulation included in the 30 total CE hours. Each student also receives five Emergency Operation CE hours.

**Emergency Operations and System Restoration**

This week-long class focuses on all aspects of emergency operations and system restoration. On completion, each student receives 32 NERC CE hours, with 10 NERC CE hours of NERC Standards and 13 NERC CE hours of simulation included in the 32 total CE hours. Each student also receives 32 Emergency Operation CE hours.

**Fundamentals of System Operations**

This three-and-a-half-day class focuses on the basics of AC/DC Theory and power system operations. This course uses the WECC System Operations Training Manual as its text and is designed for entry-level personnel new to system operations. On completion, each student receives 30 NERC CE hours, with four NERC CE hours of NERC Standards included in the 30 total CE hours. No simulation hours are available for this course; however, there are plans to include some simulation training.

**Transmission Operations**

This week-long class focuses on the operation, relay protection, voltage control, and inter-Balancing Authority impact on the BES. On completion, each student receives 30 NERC CE hours, with five NERC CE hours of NERC Standards and



12 NERC CE hours of simulation included in the 30 total CE hours. Each student also receives six Emergency Operation hours.

### **Interchange in Interconnected System Operations**

This week-long class focuses on Interchange in Interconnected System Operations. On completion, each student receives 30 NERC CE hours, with eight NERC CE hours of NERC Standards included within the 30 total CE hours. At this time no simulation hours are available or planned.

### **Schedulers Training Course**

This three-and-a-half-day class focuses on familiarizing schedulers and marketers who may be new to power system operations with the basic principles of system operations. On completion, each student receives 24 NERC CE hours, with six NERC CE hours of NERC Standards included in the 24 total CE hours. No simulation hours are available for this class.

### **Power System Dynamics Dynamics of Disturbances**

These courses are intended for very experienced operating personnel and are highly advanced. Attendance of Power System Dynamics is a prerequisite to attending Dynamics of Disturbance.

Power System Dynamics and Dynamics of Disturbances are presented by Operations-Training-Solutions (O-T-S), an external consultant, and sponsored by WECC. O-T-S is an approved NERC CE provider and is responsible for course accreditation and NERC CE hour awards.

With the changes to the WECC Training Program, WECC expects to see major improvements in the understanding and implementation of the applicable NERC Reliability Standards and WECC Regional Reliability Standards by system operators and schedulers. The courses emphasize theories of operating the BES through practical application of information provided using the generic PALCO System simulator. By using the simulator, students will gain a greater understanding of interconnected system operations and the relationship of equipment used in the BES.

- 2. State Regional Entity's assessment of its own effectiveness in Training, Education and Operator Certification since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.***

The measurement of WECC's training effectiveness is accomplished by analyzing anonymous evaluations completed by each individual attending a training course. These evaluations are reviewed by the WECC training staff and by the WECC Operations Training Subcommittee to verify course effectiveness, quality of presentations, and course material. The course evaluation summaries are also subject to audit by the NERC Continuing Education Program as WECC is a NERC-Approved Continuing Education provider.

Analysis of the evaluations has shown that the majority of course participants rate the WECC training program as "very good" to "excellent." Suggestions for additional course material provided via the evaluations combined with changes in the entities' operating environment (such as new or revised reliability standards) are taken into consideration when decisions are made about the need to revise

and/or update course material. The pre-registration for WECC's 2009 training program indicates a 28 percent increase over 2008. WECC attributes this increase to changes in its curriculum made in response to feedback from student evaluations and in response to changes in the industry's operating environment.

**3. State any proposals of Regional Entity to improve its effectiveness in Training, Education and Operator Certification**

The 2009 WECC System Operator Training Program reflects enhancements and changes to the course materials that better presents the current operating environment, and responds to comments received through the evaluation process described earlier. The 2009 schedule has 24 weeks of training planned and over 1,000 system operators pre-registered for classes in 2009. The training schedule consists of eight weeks of *Power System Dynamics and Dynamics of Disturbances*, 17 weeks of *System Operator Training*, and one week of *Schedulers' Training Course*. WECC will also provide three *System Overview Workshops* in 2009 for industry executive management personnel as well as a one-week *Train-the-Trainer Workshop* for WECC System Operator Training Instructors.

The Training Department was comprised of one full-time trainer and a contract training instructor. To further improve the quality and consistency of its training program, WECC replaced the contract training position with a full-time training instructor in February 2008. In addition, WECC is currently recruiting a manager of training. This new position will support both operator training and WECC member training. The manager of training will be responsible for coordinating the development, implementation, and documentation of all WECC system operator training and coordinating the reliability coordinator training to meet NERC Standards, criteria, and documentation. The manager of training will also be responsible for compliance and standards training as requested by members.

The changes in the WECC training program and use of the generic simulator will provide students with exposure to a variety of situations and educational experiences, such as:

- System disturbances
- Operating limit violations
- Voltage control problems
- Acceptable voltage control parameters
- Understanding how generators operate
- Loss of generating units
- Governor control on generating units
- Use of manual load shedding
- Proper use of Automatic Generation Control modes
- Understanding of frequency control

**C. Reliability Assessment and Performance Analysis Program**

**1. Describe Regional Entity's activities and accomplishments in Reliability Assessment and Performance Analysis since January 1, 2007, including discussion of improvements in this area.**

**Background**

WECC conducts a variety of studies and assessments required for the reliable planning and operation of the BES in the Western Interconnection.

To support the region's responsibilities under FERC Order 890, WECC performs long-term planning studies that look five and ten years out. These studies serve to identify transmission congestion by calculating interconnection-wide production costs and other congestion metrics on an hourly basis and under a range of resource, load, and transmission expansion scenarios.

WECC provides energy and capacity information to NERC for seasonal and long-term reliability assessments each year. This information allows NERC to complete the assessments required under Section 215 of the Federal Power Act. This work is overseen by the managing director of planning and standards.

## **Program Description and Functions**

### **Transmission Expansion Planning**

WECC assists in meeting the Region's needs for regional transmission planning and analyses and accomplishes this by providing impartial and reliable data, public process leadership, and analytic tools and services.

The Transmission Expansion Planning Policy Committee (TEPPC) — a WECC Board Committee — facilitates these activities, operates under a charter approved by the WECC Board, and has 17 members who represent all classes of stakeholders and all geographic sub-regions of WECC. This committee was established in 2007. The TEPPC Charter directs three primary functions:

1. Overseeing transmission database management.
2. Providing policy and management of the planning process.
3. Guiding the analysis and modeling for Western Interconnection transmission expansion planning.

TEPPC and its subgroups work closely and coordinate with Western state, provincial, and federal government entities.

The 2007 TEPPC Synchronized Study Plan was completed in early 2008 and represents TEPPC's initial development and preliminary examination of two resource portfolio cases. The initial development effort provided the foundation for the 2008 Synchronized Study Plan, which improved on and completed the two 2007 cases.

During 2008, WECC staff — with the assistance of the Technical Advisory Subcommittee (TAS) of TEPPC — updated the Transmission Expansion Planning Database. The updated database includes information regarding fuel prices, loads, and resources (existing and planned generation and Demand-Side Management). WECC staff uses this data to simulate Western regional production costs under various load, gas price, hydro, and other scenarios. These activities are intended to result in a comprehensive, current, and well-validated set of future load and resource scenarios that can be used to identify where transmission expansion may be needed to relieve identified congestion. In addition, the database can be used to evaluate the ability of transmission, generation, and demand-side resources to satisfy needs of the Western Interconnection.

The 2008 TEPPC Synchronized Study Plan analyzed additional resource portfolio cases and conceptual transmission expansion scenarios to relieve identified transmission congestion. Importantly, in response to a proposal by the Western Interconnection Reliability Advisory Body (WIRAB), the 2008 Plan included three new resource portfolio cases (15 percent renewable energy, 20 percent energy efficiency improvement, and 20 percent carbon reduction). The 2008 TEPPC Annual Report was approved by TEPPC and the WECC Board in March and April of 2009, respectively.

TEPPC also performed a historic study of congestion in the Western Interconnection. This congestion study will allow the U.S. Department of Energy (DOE) to meet its requirements under Section 1221 of the Energy Policy Act of 2005. The 2008 effort included the acquisition and analysis of e-Tag scheduling data and associated available transfer capacity (ATC) on major paths to identify historic schedule and physical congestion in the Western Interconnection. This will address the expressed needs of WECC stakeholders and the DOE. The work is being performed by WECC and Open Access Technology International, Inc. (OATI) with funding support provided by the Lawrence Berkley National Laboratory (LBNL). Conclusions from this work will be included with the TEPPC report described above.

The 2009 TEPPC Synchronized Study Plan commenced on November 1, 2008 with the opening of the request window for proposed studies to be included in the 2009 Study Plan. The closing date for requests to be received by WECC was January 31, 2009. From these requests, the 2009 Study Plan will be created and adopted by TEPPC in June 2009.

### **Loads and Resources**

WECC prepares and submits an annual Long-Term Reliability Assessment (LTRA) of the Western Interconnection for inclusion into NERC's LTRA filing. In addition, WECC performs summer and winter resource adequacy assessments. WECC participates in ongoing NERC discussions of data requirements and analyses that serve to address the emerging issues within the NERC LTRA process.

WECC's 2009 LTRA Work Plan addresses issues and scenarios identified by NERC, while tailoring the plan to satisfy WECC's other needs. WECC staff, assisted by the Loads and Resources Subcommittee (LRS), creates a forecast of resource adequacy in the Western Interconnection. These forecasts are performed for various sub-regions within WECC in order to characterize the expected reserve margins over the ten-year forecast period. Recent advancements have been made to the energy and capacity assessments, including an expansion of scenario inputs (such as extreme weather), and improved model and data quality. In addition, considerable effort is underway to better evaluate and characterize the sustained peak resource capability of the Northwest's hydroelectric system. This work is performed under the direction of the Planning Coordination Committee (PCC) and LRS.

To facilitate analysis of the Western Interconnection, WECC compiles load and resource information annually from the balancing and planning authorities in the West. The Loads and Resources (L&R) survey serves to quantify existing and to identify planned loads and resources of the region. The L&R data request for the 2009 studies was issued in December 2008. The survey is much improved over past years, largely due to the inclusion of more detailed and specific data.

### **Power Supply Assessment (PSA)**

The WECC PSA is an annual evaluation of generation resource reserve margins for the summer and winter peak hours. The assessment identifies sub-regions within WECC that have a potential for electricity supply shortages. The assessment is based on reported demand, including a planning reserve margin, resource data, and transmission constraints.

The PSA presents the results of a series of resource capacity margin scenarios for the Western Interconnection. These results cover a ten-year forecast period and are based on a deterministic load-resource model, and on the physical ability of the generation and transmission resources in the Western Interconnection to serve all loads — regardless of contractual obligations — of supply, transmission, or demand. The assessment also reports the results of several extreme temperature case studies.

### **Base Case Studies**

The WECC technical staff, with assistance from the System Review Work Group, annually prepares a ten-year data bank of 11 power flow base cases (five operating cases and six planning cases) and associated stability data reflecting case scenarios, system configurations, and operating conditions specified by the Technical Studies Subcommittee (TSS). These 11 base cases are developed, based on a study plan adopted by the TSS and the PCC. They are used by member utilities' planning departments to determine seasonal operating and transfer capabilities, provide a starting point for planning studies for future projects, and determine stability limits as required by NERC Standards and WECC Regional Reliability Standards.

The WECC technical staff, based on guidance from the TSS, also develops an annual report that provides an ongoing transmission reliability assessment of the Western Interconnection in both its existing state and for configurations planned through ten years into the future. A variety of disturbance simulations are performed on these cases and the results are summarized in the annual report. Identified performance deficiencies, as defined in the NERC Standards and WECC Regional Reliability Standards, are logged and forwarded to the appropriate party for mitigation.

**2. *State Regional Entity's assessment of its own effectiveness in Reliability Assessment and Performance Analysis since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.***

Improvements in WECC's effectiveness are being implemented on an ongoing basis. The databases, modeling capabilities, and tools; and the specialized expertise to perform the analysis of future resource portfolios under a range of emerging policy scenarios; are improving and building on work performed in 2007 and 2008 for the LTRA, PSA, and TEPPC studies. WECC's capabilities and performance have increased significantly since January 2007. WECC's efforts in this respect are continuing as summarized below:

- During 2008 a whitepaper on planning data was prepared by WECC staff for TEPPC. The white paper describes the loads and resources data used in the LTRA, PSA, TEPPC, and PCC base- case studies. The paper distinguishes among the study purposes, uses of data, and reasons for differences among

data sets; reconciles data comparisons to address credibility concerns; and proposes improvements in data collection efficiency.

- The TEPPC Synchronized Study Plan for 2008 for the five- and ten-year planning horizons addresses a number of robust resource portfolio cases and associated conceptual transmission expansion scenarios to relieve identified congestion. The cases were selected under the TEPPC protocol from requests received during the open season. The key portfolio cases are the WIRAB series: 15 percent renewables West-wide (as compared to existing Regional Portfolio Standards requirements of about 8.6 percent), 20 percent energy efficiency improvement, and a 20 percent carbon reduction case. TEPPC is coordinating sub-regional transmission planning efforts under FERC Order 890. Importantly, the TEPPC portfolio cases address two key areas of concern identified by the Western Electric Industry Leaders (WEIL) Group: high renewable resource penetration and carbon constraints.
- WECC's analysis of actual historic congestion on major paths in the Western Interconnection is a second dimension of the effort to better assess the current and future reliability of the Western Interconnection. To facilitate this work, WECC entered into a contract with OATI to acquire e-Tag schedule data and associated ATC on major paths to more fully characterize the level of existing congestion, which has been a need identified within the West and by the DOE. WECC also entered into a subcontract with LBNL to obtain significant funding support for the acquisition and analysis of this commercial data.
- WECC established the position of managing director of planning and standards in March 2008. In May 2008, WECC hired a renewable integration director to spearhead its efforts to address the significant challenges associated with high penetration levels of variable renewable resources. As a result, the TEPPC cases incorporate the latest National Renewable Energy Laboratory three-year meso-scale data on both wind and solar throughout the Western U.S. WECC is working closely with TEPPC, TAS, and multiple working groups to perform the studies. The excellent working relationships with the WIRAB have advanced the analysis significantly.
- TEPPC and the PCC are actively clarifying their respective and complementary roles and responsibilities.

The efforts described above enhance WECC's overall ability to participate in and respond to the major public policy issues emerging in the Western Interconnection and nationally.

**3. *State any proposals of Regional Reliability Entity to improve its effectiveness in Reliability Assessment and Performance Analysis.***

Improvements in WECC's effectiveness are being implemented on an ongoing basis as described in response to Items 1 and 2. Importantly, the databases, modeling capabilities, and tools; and the specialized expertise to perform the analysis of future resource portfolios under a range of emerging policy scenarios; are improving and building upon work performed in 2007 and 2008. WECC expects that the range of study requests for TEPPC's 2009 Synchronized Study Plan will be robust and will reflect needs identified by a broad set of stakeholders in the Western Interconnection. WIRAB, WEIL, the sub-regional planning groups, and others have expressed keen interest in building on the 2008 TEPPC

Synchronized Study Plan to test other emerging portfolio and policy uncertainties.

TEPPC is currently preparing to submit a response to DOE's Funding Opportunity Announcement (FOA) to perform expanded transmission planning functions and develop a regional transmission plan(s) pursuant to the American Recovery and Reinvestment Act (Stimulus Bill). TEPPC is preparing a stakeholder-driven whitepaper to provide a framework for the response to DOE's FOA.

TEPPC sponsored a Long-Term Transmission Planning Seminar in February 2009 to examine a comprehensive range of issues related to enhancing the regional transmission planning functions, characteristics of alternative Extra High Voltage technologies and overlays, siting and permitting challenges and other related issues.

WECC co-sponsored a Resource Planning Forum in February 2009, as part of WECC's ongoing effort to better assure that individual entity Integrated Resource Plans, the Western Governors' Association's Western Renewable Energy Zones Project, and other studies are evaluated and incorporated into planning throughout the Western Interconnection. This work will serve to better facilitate renewable resource development and transmission expansion while mitigating climate/carbon risk. Other issues related to potential risk of reductions or loss of existing resource capabilities (for example, additional hydro restrictions and once-through cooling requirements) are likely to be examined in TEPPC studies.

On December 8, 2008, the LRS issued an enhanced and consolidated data request (L&R survey) to cover the data needs of the LTRA, PSA, TEPPC, and TSS study efforts in the West. Responses were due March 2, 2009. This should improve the efficiency and use of the loads and resources data across all study efforts, and should mitigate or eliminate the duplicative data acquisition processes. The LRS is also testing a next-generation resource adequacy analysis method that uses a production cost model similar to TEPPC. This will replace the existing deterministic seasonal model used by the PSA and should provide a more transparent link between the PSA, LTRA, and TEPPC.

WECC's Joint Guidance Committee (the PCC, Operating Committee, and Market Interface Committee) has established a Variable Generation Subcommittee (VGS). The purpose of the VGS is to identify issues and opportunities related to the presence of variable generation sources in the Western Interconnection, and to facilitate the development and implementation of solutions that add distinct value to WECC. The VGS will focus on the regional reliability and market challenges of renewable energy integration by compiling information and member issues, coordinating analyses, and disseminating information back to the membership.

Additional budget and specialized expertise will be needed to meet the accelerating needs related to Reliability Assessment within the Western Interconnection. Three of the five strategic objectives detailed in WECC's Three-to-Five-Year Strategic Plan relate to expanded technical analysis, planning, and policy facilitation roles for WECC. These objectives are a major focus for the WECC Reliability Assessment function as is TEPPC's upcoming response to the DOE FOA described above, which will seek funding support for expanded regional transmission planning efforts.

## **D. Situational Awareness and Infrastructure Security Program**

### **1. Describe Regional Entity's activities and accomplishments in Situational Awareness and Infrastructure Security since January 1, 2007, including discussion of improvements in this area.**

Since 1997, WECC operated three Reliability Coordination Offices (RCOs) that collectively provided a real-time, wide-area view of the BES. Through contractual agreements and the existence of mandatory standards, Reliability Coordinators based in the RCOs had the ability to give WECC Reliability Entities directives that protect and maintain system security.

The three RCOs were hosted by major transmission operators who charged WECC for overhead and other costs associated with operating the RCOs. Reliability Coordinators at the RCOs were a mix of employees of the host organization or of WECC, or were independent contractors.

In 2006, the WECC Board approved the Reliability Coordination Strategic Initiative (RCSI), which was designed to make reliability coordination in the Western Interconnection more effective and efficient. The initiative included consolidation of the RCOs from three to two, increasing real-time Reliability Coordinator staffing, developing a comprehensive model (the West-wide System Model (WSM)) of the Western Interconnection, and increasing the independence of the Reliability Coordinators. The WSM provides a common view of the entire Western Interconnection to WECC's Reliability Coordinators and the two new RCOs, which went live on January 1, 2009 and serve as "hot" backup for each other. Going forward, the WSM is the platform on which advanced applications and common tools will be built. Through the use of these tools, real-time stability and other studies can be performed. The WSM was completed prior to November 1, 2008 and underwent validation by the WECC Reliability Coordinators during parallel operations, prior to the opening of the new WECC RCOs.

In February 2007, WECC hired a director of reliability coordination to oversee the existing RCOs. As a reflection of the importance and responsibility associated with this role, this position was subsequently promoted to managing director of reliability coordination in January 2008. This position focuses on budget management, employee oversight, and operational consistency. This director has improved the consistency of operations between the current RCOs and provided a single point of accountability for the RCO teams. In September 2007, WECC hired an energy management system manager to provide budget and technical oversight for the WSM project, and to inform and communicate data requirements to the WECC membership. Starting in January 2008, WECC began converting the Pacific Northwest Security Coordinator and Rocky Mountain Desert Southwest Reliability Coordinator staffs to WECC employees. This initiative was completed in November of 2008.

The WECC Board approved the following initiatives during its December 2007 meeting:

- 1. Both of the new Reliability Centers<sup>18</sup> are scheduled to be operational by January 1, 2009.*

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<sup>18</sup> Reliability Centers are now known as Reliability Coordination Offices (RCOs).



2. *The centers will be located in Vancouver, Washington and Loveland, Colorado.*
3. *The centers will be hosted and operated by WECC.*
4. *The WSM will also be hosted at each of the centers.*
5. *The amended budget for Situational Awareness and Reliability Coordination will be used to fund the accelerated implementation of the new Reliability Centers.*

Along with their real-time reliability functions and responsibilities, the WECC Reliability Coordination staff spent 2008 working on completing the WECC Board initiatives approved in December 2007, as well as maintaining WECC's reliability function in the three RCOs. Special attention was paid to the retention of WECC's existing Reliability Coordinators and to the maintenance of its current processes and relationships with Reliability Entities within the Western Interconnection. The goal was to minimize the changes experienced by the Reliability Entities during the transition to the two new WECC RCOs. WECC currently employs:<sup>19</sup>

- 1..... Managing Director of Reliability Coordination (formerly the Director of Reliability Coordination)
- 1..... Director of Energy Management System and IT Services<sup>20</sup> (formally Energy Management System Manager)
- 2..... Reliability Coordination Managers
- 23..... Reliability Coordinators
- 2..... Lead Reliability Coordinators
- 1..... Energy Management System Technical Manager
- 1..... Lead Applications Architect
- 1..... Lead IT Architect
- 1..... Reliability Coordinator Trainer
- 12..... Energy Management System model, study, and application engineers
- 1..... Critical Infrastructure Protection Engineer
- 2..... Administrative Assistants
- 1..... Reliability Coordination Compliance Manager

Operation of the new RCOs is producing reliability improvements resulting from the consolidation and common hosting of the WSM. Reliability is also being enhanced by simultaneous initial operation of both centers and the WSM.

**2. *State Regional Entity's assessment of its own effectiveness in Situational Awareness and Infrastructure Security since January 1, 2007. If effectiveness has changed over this period (either improved or worsened), this should be discussed.***

Effectiveness in Situational Awareness and Infrastructure Security has improved since January 1, 2007 as a consequence of the hiring of the WECC director of reliability coordination (a year later, this position was promoted to managing

<sup>19</sup> As of May 31, 2009.

<sup>20</sup> Two IT Network Administrators report to the Director of Energy Management System and IT Services.

director of reliability coordination). In 2008, WECC hired two<sup>21</sup> dedicated reliability coordination trainers who have developed a comprehensive Reliability Coordinator training program that covers all Reliability Coordination functions in the Western Interconnection. These factors, combined with the WECC RCSI (which was sponsored by WECC executive staff and approved by the WECC Board), have improved WECC's effectiveness in Situational Awareness and Infrastructure Security. FERC's order<sup>22</sup> allowing Section 215 statutory funding for the WECC Reliability Coordinator function further solidified WECC's goal of increasing and improving situational awareness in the Western Interconnection.

As part of the RCSI, in late 2006 WECC selected Areva as the Energy Management System vendor for the WSM. Having one integrated model for the Western Interconnection, with a solid application platform for the development of common tools, will enhance real-time situational awareness and provide better study tools for WECC's operation engineers. One of the objectives for 2009 is the development of pertinent PI system displays that the WECC membership can access through a secure Web site.

WECC's participation in NERC's Reliability Coordination Work Group, Operations Reliability Subcommittee, and Operating Committee; and the work of WECC's Operating Committee, Energy Management System Work Group, Reliability Coordination Subcommittee, and Data Exchange Work Group; have increased WECC's visibility to its members and to other Reliability Entities.

**3. State any proposals of Regional Entity to improve its effectiveness in Situational Awareness and Infrastructure Security.**

WECC completed the WECC RCSI and transferred operations to the two new RCOs on January 1, 2009. The initiative includes ownership and maintenance of all Reliability Coordination critical and cyber assets.

WECC Reliability Coordination plans to share the WSM with Balancing Authorities and Transmission Operators within WECC that comply with FERC Order 889, have signed WECC's License Agreement, and have agreed to maintain confidentiality of the WSM. This enhances situational awareness from a grass roots level within WECC because each reliability entity will have access to the most robust representation of the Western Interconnection available.

In 2009, WECC hired a manager of reliability coordination compliance who manages the compliance workload for the RCOs. This position is the point of contact for all external and internal compliance-related matters regarding WECC Reliability Coordination. The manager of reliability coordination compliance has direct responsibility for ensuring that the WECC RCOs meet all the mandatory compliance requirements.

Moving ahead through 2009 and beyond, WECC will continue to assess the changing industry landscape — its tools, training, and headcount — to provide the most effective and efficient reliability organization for the Western Interconnection.

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<sup>21</sup> As of May 31, 2009 one of these positions is vacant.

<sup>22</sup> NERC, 119 FERC ¶ 61,059 (April 19, 2007).

## **E. Budgeting**

### **1. Describe Regional Entity's activities and accomplishments in the development and submission of its annual business plan and budget, beginning with the 2007 business plan and budget.**

Every year, WECC has improved the detail and depth of its business plan and budget, and has improved consistency, formatting, and topics with the other regions. WECC carries reserves to cover unforeseen expenditures.

#### **2007 Business Plan and Budget Preparation Process**

The 2007 budget preparation process went smoothly, considering it was WECC's first year as a Regional Entity. As a transition year, some of the processes were carry-overs from WECC's historic methods. Specifically, the WECC budget was prepared using WECC's accounting system account numbers, which differed from the ERO format. Consequently, WECC's budget template had to map the NERC ERO accounts and program areas to the WECC accounts. All payroll tax costs and benefit costs were budgeted in General and Administrative, and were allocated out to the departments along with other overhead costs (such as rent or office supplies) based on headcount. Capital items were included in the operating budget and were capitalized at the end of the year after final NERC reports were produced.

WECC staff produced the 2007 Business Plan and Budget, which was subsequently approved by WECC management and the WECC Board prior to submission to NERC.

#### **2008 Business Plan and Budget Preparation Process**

The processes used in 2007 were followed for the preparation of the 2008 Business Plan and Budget. WECC was able to use existing spreadsheet tools in conjunction with the new ERO budgeting process and NERC reporting templates. However, after a significant portion of the 2008 business plan was written, NERC modified the format and supplied a template for WECC and the other Regional Entities to follow. The business plan was revised to conform to the NERC template. The chief administrator provided financial data and the directors provided program information.

#### **2009 Business Plan and Budget Preparation Process**

The 2009 business plan was more comprehensive and provided more detail than the plans from 2007 and 2008. This was due to both the development of a WECC strategic plan and the more detailed NERC templates supplied for the 2009 Business Plan and Budget. WECC began the development of a three-to-five-year strategic plan in 2007. The 2009 Business Plan and Budget was the first budget that incorporated material from the strategic plan. Additionally, the NERC templates provided more direction as to the requested financial information. WECC also discontinued the allocation of internal overheads to the various department budgets in the 2009 budget. This change was mainly to conform with methodology used by NERC by allocating expenses of designated indirect expense departments to the program areas in one lump sum based on full-time equivalents.

**2. State Regional Entity's assessment of its own effectiveness in developing its business plans and budgets and in the submission of its business plans and budgets in a consistent manner with NERC and the other Regional Entities.**

WECC has been very effective in developing its business plans and budgets, and in modifying internal processes and tools to meet NERC ERO requirements. Every department participates and NERC deadlines have been consistently met. With each successive year, WECC has adapted the process to make it more efficient and effective.

For 2007, WECC results came in \$618,000 over budget (three percent), mainly due to the uncertainties surrounding the CMEP area. Based on the evolving nature of the business, WECC believes that the budget preparation process went very well and was extremely effective. A three-percent budget over-run is minimal considering the rapidly changing environment in which WECC is operating. In 2008, WECC stopped the internal overhead allocations because the methodology was not consistent with NERC and the other Regional Entities, and because it created unnecessary and duplicative work.

The 2009 plan is the most consistent to date and improvements for 2010 are in process, as discussed in WECC's response to Item 3. WECC and the other Regional Entities will continue their endeavors to increase consistency across regions in the preparation and presentation of their business plans and budgets.

With each budget year, WECC has become more adept at preparing its annual budget and business plan. Marked improvements in the business plans and budgets submitted to NERC from 2007 to 2009 are obvious when examining the documents side-by-side. The 2009 Business Plan and Budget is much more thorough and comprehensive than in years past (89 pages versus 27 in 2008 and 23 pages in 2007). The Regional Entities have done an excellent job of working together to help make these documents more consistent for ease of reading and understanding across the regions.

**3. State any proposals of the Regional Entity to improve its effectiveness in submitting effective, adequate and consistent business plans and budgets.**

WECC's current treatment of certain costs such as payroll and benefits is not consistent with other Regional Entities. WECC has included these costs in the General and Administrative area, and they are then allocated out to the various program areas with General and Administrative and other indirect costs. For 2010, WECC will modify the budgeting process to include all direct and identifiable costs in the program areas to which they relate.

For the 2010 budgeting process, one of the goals of all the Regional Entities is to make budgets consistent so far as the methodology used. The Regional Entities have been meeting to generate ideas of how to improve this process and how to improve consistency across regions.

WECC will continue to increase the role of program area directors in the budget preparation process and will also continue to refine the budgets for use as a management tool. In late 2008, monthly budget-to-actual meetings were scheduled with directors and those meetings are now part of the monthly

financial reporting and review process. The regularly recurring meetings are also excellent building blocks for the upcoming 2010 budget preparation process.

WECC stakeholders have indicated a desire for the opportunity to provide input into the annual budgeting process. For the 2010 budget greater input than in previous years, was solicited from Chairs and Vice-Chairs of the OC, PCC, TEPPC, and MIC prior to the first budget review meeting with the Finance and Audit Committee. WECC's FAC meetings, where the draft budgets are reviewed, are open meetings and stakeholders are welcome to participate in person or via teleconference.

In response to the first round of stakeholder feedback, WECC staff, in concert with the WECC FAC, revised WECC's 2010 budget timelines to incorporate a public comment period. As part of this process, WECC posted the first and second drafts of its 2010 Business Plan and Budget on the WECC Web site and invited comments. In addition, the drafts were sent by email to the WECC Board and WECC Member representatives and comments invited. WECC received one comment as a result of its public posting process and posted its response on the WECC Web site.

In addition, WECC stakeholders commented on the need for greater transparency around cost increases and how they add value or contribute to risk management. The NERC template that has been developed for use by the Regional Entities for the 2010 business plan and budget addresses this concern by including budget assumptions, cost impacts, goals, objectives and explanations of increases and decreases in funding requirements.

**FEDERAL ENERGY REGULATORY COMMISSION  
DOCKET NO. RR09-\_\_\_**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

**ATTACHMENT 5**

**TO**

**THREE-YEAR  
ELECTRIC RELIABILITY ORGANIZATION  
PERFORMANCE ASSESSMENT REPORT**

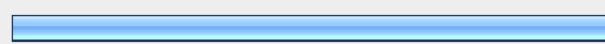



**STAKEHOLDER SURVEY RESULTS**

**JULY 20, 2009**




# Electric Reliability Organization and Regional Entity Performance Assessment

1. Entity Name:		Response Count
		142
<i>answered question</i>		142
<i>skipped question</i>		0

These 142 surveys represent responses from 250 register entities and/or industry stakeholders. All non-responsive or duplicate surveys have been removed from this analysis.

2. Entity Type:		Response Percent	Response Count
Registered Entity in NERC Compliance Registry		90.1%	128
Trade Association or Organized Interest Group		3.5%	5
Regulator: State, Provincial, Federal, or Other		2.1%	3
Other Reliability Stakeholder or Public		4.2%	6
<i>answered question</i>			142
<i>skipped question</i>			0

3. Entity Compliance Registry Code: (Type NA if not applicable)		Response Count
		128
<i>answered question</i>		128
<i>skipped question</i>		14

4. Primary Country:			
		Response Percent	Response Count
U.S.		95.1%	135
Canada		4.2%	6
Mexico		0.7%	1
		<i>answered question</i>	142
		<i>skipped question</i>	0



## Reliability Standards

5. Has developed reliability standards that clearly indicate which bulk power system owners, operators, and users must comply.								
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count	
NERC	0.0% (0)	25.0% (31)	40.3% (50)	14.5% (18)	17.7% (22)	2.4% (3)	124	
FRCC	85.4% (41)	8.3% (4)	0.0% (0)	6.3% (3)	0.0% (0)	0.0% (0)	48	
MRO	68.5% (37)	11.1% (6)	13.0% (7)	7.4% (4)	0.0% (0)	0.0% (0)	54	
NPCC	66.7% (34)	13.7% (7)	5.9% (3)	7.8% (4)	5.9% (3)	0.0% (0)	51	
RFC	57.6% (34)	11.9% (7)	10.2% (6)	11.9% (7)	8.5% (5)	0.0% (0)	59	
SERC	67.3% (37)	18.2% (10)	9.1% (5)	5.5% (3)	0.0% (0)	0.0% (0)	55	
SPP	59.0% (36)	23.0% (14)	3.3% (2)	9.8% (6)	1.6% (1)	3.3% (2)	61	
TRE	77.1% (37)	10.4% (5)	2.1% (1)	4.2% (2)	4.2% (2)	2.1% (1)	48	
WECC	33.8% (26)	16.9% (13)	22.1% (17)	15.6% (12)	6.5% (5)	5.2% (4)	77	
						Comments and recommendations:	61	
						<i>answered question</i>	133	
						<i>skipped question</i>	9	

6. Has developed reliability standards that provide a clear indication of the level of performance required and the measures used to evaluate performance.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	0.0% (0)	13.9% (17)	25.4% (31)	23.8% (29)	31.1% (38)	5.7% (7)	122
FRCC	84.4% (38)	2.2% (1)	0.0% (0)	8.9% (4)	2.2% (1)	2.2% (1)	45
MRO	66.0% (33)	4.0% (2)	10.0% (5)	14.0% (7)	4.0% (2)	2.0% (1)	50
NPCC	67.3% (33)	10.2% (5)	6.1% (3)	10.2% (5)	2.0% (1)	4.1% (2)	49
RFC	60.7% (34)	7.1% (4)	7.1% (4)	17.9% (10)	5.4% (3)	1.8% (1)	56
SERC	69.2% (36)	9.6% (5)	7.7% (4)	7.7% (4)	3.8% (2)	1.9% (1)	52
SPP	55.9% (33)	16.9% (10)	6.8% (4)	15.3% (9)	1.7% (1)	3.4% (2)	59
TRE	76.1% (35)	8.7% (4)	4.3% (2)	8.7% (4)	0.0% (0)	2.2% (1)	46
WECC	34.7% (26)	9.3% (7)	17.3% (13)	16.0% (12)	14.7% (11)	8.0% (6)	75
						Comments and recommendations:	56
						<i>answered question</i>	131
						<i>skipped question</i>	11

7. Requirements of reliability standards have a sound basis in engineering and operations.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	1.7% (2)	20.7% (25)	<b>38.0% (46)</b>	28.1% (34)	7.4% (9)	4.1% (5)	121
FRCC	<b>88.6% (39)</b>	2.3% (1)	2.3% (1)	6.8% (3)	0.0% (0)	0.0% (0)	44
MRO	<b>68.6% (35)</b>	7.8% (4)	13.7% (7)	9.8% (5)	0.0% (0)	0.0% (0)	51
NPCC	<b>68.1% (32)</b>	14.9% (7)	10.6% (5)	6.4% (3)	0.0% (0)	0.0% (0)	47
RFC	<b>60.4% (32)</b>	9.4% (5)	11.3% (6)	11.3% (6)	7.5% (4)	0.0% (0)	53
SERC	<b>69.2% (36)</b>	11.5% (6)	9.6% (5)	7.7% (4)	1.9% (1)	0.0% (0)	52
SPP	<b>56.9% (33)</b>	20.7% (12)	10.3% (6)	10.3% (6)	0.0% (0)	1.7% (1)	58
TRE	<b>77.8% (35)</b>	11.1% (5)	2.2% (1)	8.9% (4)	0.0% (0)	0.0% (0)	45
WECC	<b>34.7% (26)</b>	12.0% (9)	18.7% (14)	26.7% (20)	4.0% (3)	4.0% (3)	75
				Comments and recommendations:			46
<b>answered question</b>							<b>131</b>
<b>skipped question</b>							<b>11</b>

8. Standards development process to date has resulted in timely development and modification of standards.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	4.9% (6)	18.0% (22)	24.6% (30)	<b>26.2% (32)</b>	18.9% (23)	7.4% (9)	122
FRCC	<b>87.0% (40)</b>	2.2% (1)	2.2% (1)	8.7% (4)	0.0% (0)	0.0% (0)	46
MRO	<b>67.3% (35)</b>	5.8% (3)	3.8% (2)	9.6% (5)	7.7% (4)	5.8% (3)	52
NPCC	<b>69.4% (34)</b>	8.2% (4)	6.1% (3)	10.2% (5)	4.1% (2)	2.0% (1)	49
RFC	<b>59.3% (32)</b>	3.7% (2)	13.0% (7)	14.8% (8)	7.4% (4)	1.9% (1)	54
SERC	<b>69.2% (36)</b>	11.5% (6)	7.7% (4)	9.6% (5)	1.9% (1)	0.0% (0)	52
SPP	<b>55.2% (32)</b>	10.3% (6)	13.8% (8)	13.8% (8)	3.4% (2)	3.4% (2)	58
TRE	<b>75.6% (34)</b>	4.4% (2)	4.4% (2)	8.9% (4)	6.7% (3)	0.0% (0)	45
WECC	<b>36.0% (27)</b>	6.7% (5)	10.7% (8)	30.7% (23)	14.7% (11)	1.3% (1)	75
				Comments and recommendations:			50
				<i>answered question</i>			<b>132</b>
				<i>skipped question</i>			<b>10</b>

**9. Standards development process has been open and inclusive and provides adequate opportunities for interested stakeholders to provide comments.**

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	4.1% (5)	49.6% (61)	26.0% (32)	9.8% (12)	7.3% (9)	3.3% (4)	123
FRCC	86.0% (37)	9.3% (4)	0.0% (0)	2.3% (1)	2.3% (1)	0.0% (0)	43
MRO	66.0% (33)	18.0% (9)	8.0% (4)	4.0% (2)	4.0% (2)	0.0% (0)	50
NPCC	68.1% (32)	23.4% (11)	4.3% (2)	2.1% (1)	2.1% (1)	0.0% (0)	47
RFC	57.1% (32)	21.4% (12)	8.9% (5)	7.1% (4)	3.6% (2)	1.8% (1)	56
SERC	66.0% (33)	22.0% (11)	4.0% (2)	6.0% (3)	2.0% (1)	0.0% (0)	50
SPP	52.6% (30)	35.1% (20)	8.8% (5)	1.8% (1)	0.0% (0)	1.8% (1)	57
TRE	75.0% (33)	18.2% (8)	4.5% (2)	2.3% (1)	0.0% (0)	0.0% (0)	44
WECC	39.0% (30)	33.8% (26)	7.8% (6)	11.7% (9)	5.2% (4)	2.6% (2)	77
						Comments and recommendations:	40
						<i>answered question</i>	132
						<i>skipped question</i>	10

10. NERC's three-year reliability standards work plans have provided appropriate statements of the work scope and priorities necessary to develop new reliability standards and modifications to standards that are most needed.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	12.3% (15)	18.9% (23)	25.4% (31)	<b>36.9% (45)</b>	6.6% (8)	0.0% (0)	122
FRCC	<b>93.2% (41)</b>	2.3% (1)	0.0% (0)	4.5% (2)	0.0% (0)	0.0% (0)	44
MRO	<b>76.0% (38)</b>	8.0% (4)	4.0% (2)	10.0% (5)	2.0% (1)	0.0% (0)	50
NPCC	<b>76.6% (36)</b>	4.3% (2)	8.5% (4)	10.6% (5)	0.0% (0)	0.0% (0)	47
RFC	<b>73.6% (39)</b>	1.9% (1)	11.3% (6)	11.3% (6)	1.9% (1)	0.0% (0)	53
SERC	<b>78.0% (39)</b>	4.0% (2)	10.0% (5)	6.0% (3)	2.0% (1)	0.0% (0)	50
SPP	<b>67.9% (38)</b>	12.5% (7)	5.4% (3)	12.5% (7)	0.0% (0)	1.8% (1)	56
TRE	<b>82.2% (37)</b>	4.4% (2)	4.4% (2)	8.9% (4)	0.0% (0)	0.0% (0)	45
WECC	<b>54.8% (40)</b>	8.2% (6)	6.8% (5)	28.8% (21)	1.4% (1)	0.0% (0)	73
				Comments and recommendations:			29
					<i>answered question</i>		131
					<i>skipped question</i>		11

11. Comments and recommendations for improvement (specifically number recommendations, i.e. Recommendation 1):

	Response Count
	51
<i>answered question</i>	51
<i>skipped question</i>	91

## Compliance

12. Based on your experience, NERC/Regional Entity's compliance monitoring and enforcement program comprehensively covers all requirements of reliability standards applicable to your operations and does not leave gaps in the monitoring of compliance with these requirements.								
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count	
NERC	5.9% (7)	34.7% (41)	30.5% (36)	22.0% (26)	4.2% (5)	2.5% (3)	118	
FRCC	83.7% (36)	4.7% (2)	4.7% (2)	7.0% (3)	0.0% (0)	0.0% (0)	43	
MRO	65.3% (32)	16.3% (8)	10.2% (5)	6.1% (3)	2.0% (1)	0.0% (0)	49	
NPCC	63.0% (29)	17.4% (8)	8.7% (4)	10.9% (5)	0.0% (0)	0.0% (0)	46	
RFC	53.8% (28)	15.4% (8)	11.5% (6)	19.2% (10)	0.0% (0)	0.0% (0)	52	
SERC	58.0% (29)	28.0% (14)	8.0% (4)	6.0% (3)	0.0% (0)	0.0% (0)	50	
SPP	43.9% (25)	29.8% (17)	10.5% (6)	10.5% (6)	1.8% (1)	3.5% (2)	57	
TRE	72.1% (31)	11.6% (5)	4.7% (2)	9.3% (4)	0.0% (0)	2.3% (1)	43	
WECC	36.1% (26)	19.4% (14)	19.4% (14)	20.8% (15)	1.4% (1)	2.8% (2)	72	
						Comments and recommendations:	31	
						<i>answered question</i>	128	
						<i>skipped question</i>	14	



13. Provides clear readily available and accessible information on what level of performance is necessary to comply with requirements of applicable reliability standards and what documentation and other evidence is needed to demonstrate compliance.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	1.7% (2)	14.7% (17)	17.2% (20)	21.6% (25)	37.9% (44)	6.9% (8)	116
FRCC	83.7% (36)	2.3% (1)	0.0% (0)	2.3% (1)	9.3% (4)	2.3% (1)	43
MRO	62.7% (32)	3.9% (2)	5.9% (3)	7.8% (4)	17.6% (9)	2.0% (1)	51
NPCC	61.7% (29)	6.4% (3)	8.5% (4)	10.6% (5)	10.6% (5)	2.1% (1)	47
RFC	52.7% (29)	5.5% (3)	7.3% (4)	12.7% (7)	18.2% (10)	3.6% (2)	55
SERC	56.0% (28)	10.0% (5)	6.0% (3)	14.0% (7)	12.0% (6)	2.0% (1)	50
SPP	43.9% (25)	24.6% (14)	8.8% (5)	10.5% (6)	8.8% (5)	3.5% (2)	57
TRE	72.1% (31)	7.0% (3)	4.7% (2)	7.0% (3)	7.0% (3)	2.3% (1)	43
WECC	31.5% (23)	8.2% (6)	6.8% (5)	13.7% (10)	31.5% (23)	8.2% (6)	73
					Comments and recommendations:		61
					<i>answered question</i>		125
					<i>skipped question</i>		17

14. Provides reasonable notice of compliance audits, including information that will be required during the audit process.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	22.8% (26)	36.8% (42)	21.9% (25)	10.5% (12)	6.1% (7)	1.8% (2)	114
FRCC	85.7% (36)	4.8% (2)	4.8% (2)	2.4% (1)	2.4% (1)	0.0% (0)	42
MRO	70.8% (34)	14.6% (7)	10.4% (5)	4.2% (2)	0.0% (0)	0.0% (0)	48
NPCC	70.2% (33)	19.1% (9)	4.3% (2)	4.3% (2)	2.1% (1)	0.0% (0)	47
RFC	54.5% (30)	14.5% (8)	14.5% (8)	12.7% (7)	1.8% (1)	1.8% (1)	55
SERC	66.0% (33)	22.0% (11)	8.0% (4)	2.0% (1)	2.0% (1)	0.0% (0)	50
SPP	48.2% (27)	33.9% (19)	7.1% (4)	7.1% (4)	1.8% (1)	1.8% (1)	56
TRE	74.4% (32)	16.3% (7)	4.7% (2)	4.7% (2)	0.0% (0)	0.0% (0)	43
WECC	40.0% (28)	25.7% (18)	20.0% (14)	8.6% (6)	4.3% (3)	1.4% (1)	70
						Comments and recommendations:	39
						<i>answered question</i>	<b>127</b>
						<i>skipped question</i>	<b>15</b>

15. Staff conducts the audit in a professional, thorough, and efficient manner.							
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	42.5% (48)	31.0% (35)	13.3% (15)	13.3% (15)	0.0% (0)	0.0% (0)	113
FRCC	90.7% (39)	4.7% (2)	2.3% (1)	2.3% (1)	0.0% (0)	0.0% (0)	43
MRO	74.0% (37)	16.0% (8)	8.0% (4)	2.0% (1)	0.0% (0)	0.0% (0)	50
NPCC	78.7% (37)	21.3% (10)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	47
RFC	61.4% (35)	17.5% (10)	10.5% (6)	7.0% (4)	3.5% (2)	0.0% (0)	57
SERC	69.2% (36)	23.1% (12)	5.8% (3)	0.0% (0)	1.9% (1)	0.0% (0)	52
SPP	64.9% (37)	24.6% (14)	5.3% (3)	3.5% (2)	0.0% (0)	1.8% (1)	57
TRE	79.1% (34)	16.3% (7)	4.7% (2)	0.0% (0)	0.0% (0)	0.0% (0)	43
WECC	65.3% (47)	20.8% (15)	8.3% (6)	5.6% (4)	0.0% (0)	0.0% (0)	72
						Comments and recommendations:	46
						<i>answered question</i>	126
						<i>skipped question</i>	16

16. Provides timely feedback and reports to responsible entities, including prompt identification of possible violations of reliability standards.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	45.9% (51)	20.7% (23)	9.0% (10)	12.6% (14)	10.8% (12)	0.9% (1)	111
FRCC	88.1% (37)	4.8% (2)	2.4% (1)	4.8% (2)	0.0% (0)	0.0% (0)	42
MRO	70.6% (36)	13.7% (7)	7.8% (4)	3.9% (2)	3.9% (2)	0.0% (0)	51
NPCC	73.9% (34)	21.7% (10)	0.0% (0)	4.3% (2)	0.0% (0)	0.0% (0)	46
RFC	61.1% (33)	18.5% (10)	1.9% (1)	13.0% (7)	3.7% (2)	1.9% (1)	54
SERC	67.3% (35)	21.2% (11)	3.8% (2)	7.7% (4)	0.0% (0)	0.0% (0)	52
SPP	61.4% (35)	26.3% (15)	3.5% (2)	5.3% (3)	1.8% (1)	1.8% (1)	57
TRE	79.1% (34)	16.3% (7)	2.3% (1)	2.3% (1)	0.0% (0)	0.0% (0)	43
WECC	43.7% (31)	12.7% (9)	4.2% (3)	11.3% (8)	11.3% (8)	16.9% (12)	71
						Comments and recommendations:	42
						<i>answered question</i>	126
						<i>skipped question</i>	16

17. Processes violations to a final state in a timely manner.								
		NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
	NERC	50.0% (57)	9.6% (11)	4.4% (5)	17.5% (20)	9.6% (11)	8.8% (10)	114
	FRCC	93.0% (40)	2.3% (1)	0.0% (0)	0.0% (0)	2.3% (1)	2.3% (1)	43
	MRO	78.4% (40)	7.8% (4)	0.0% (0)	9.8% (5)	0.0% (0)	3.9% (2)	51
	NPCC	84.4% (38)	11.1% (5)	0.0% (0)	2.2% (1)	0.0% (0)	2.2% (1)	45
	RFC	71.4% (40)	5.4% (3)	1.8% (1)	14.3% (8)	1.8% (1)	5.4% (3)	56
	SERC	71.7% (38)	17.0% (9)	1.9% (1)	5.7% (3)	1.9% (1)	1.9% (1)	53
	SPP	75.0% (42)	8.9% (5)	1.8% (1)	7.1% (4)	3.6% (2)	3.6% (2)	56
	TRE	88.1% (37)	7.1% (3)	2.4% (1)	0.0% (0)	0.0% (0)	2.4% (1)	42
	WECC	56.2% (41)	4.1% (3)	2.7% (2)	16.4% (12)	4.1% (3)	16.4% (12)	73
					Comments and recommendations:			44
						<i>answered question</i>		126
						<i>skipped question</i>		16

18. Is effective in encouraging registered entities to conduct internal self-assessments of compliance and to self-report possible violations in a timely manner.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	6.4% (7)	41.8% (46)	31.8% (35)	10.9% (12)	9.1% (10)	0.0% (0)	110
FRCC	79.1% (34)	9.3% (4)	4.7% (2)	4.7% (2)	2.3% (1)	0.0% (0)	43
MRO	60.8% (31)	17.6% (9)	9.8% (5)	7.8% (4)	3.9% (2)	0.0% (0)	51
NPCC	63.0% (29)	19.6% (9)	13.0% (6)	4.3% (2)	0.0% (0)	0.0% (0)	46
RFC	50.9% (28)	21.8% (12)	9.1% (5)	14.5% (8)	1.8% (1)	1.8% (1)	55
SERC	55.8% (29)	30.8% (16)	7.7% (4)	5.8% (3)	0.0% (0)	0.0% (0)	52
SPP	45.6% (26)	36.8% (21)	10.5% (6)	3.5% (2)	1.8% (1)	1.8% (1)	57
TRE	65.1% (28)	20.9% (9)	7.0% (3)	4.7% (2)	2.3% (1)	0.0% (0)	43
WECC	34.2% (25)	30.1% (22)	20.5% (15)	11.0% (8)	2.7% (2)	1.4% (1)	73
					Comments and recommendations:		31
					<i>answered question</i>		126
					<i>skipped question</i>		16

19. NERC "Sanctions Guidelines" are understandable and in conjunction with the Violation Risk Factors and Violation Severity Levels for individual Standards, clearly communicate the likely range of financial penalty that will be imposed for violations of specific requirements of reliability standards.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	10.3% (12)	18.1% (21)	16.4% (19)	20.7% (24)	25.0% (29)	9.5% (11)	116
FRCC	88.1% (37)	7.1% (3)	0.0% (0)	4.8% (2)	0.0% (0)	0.0% (0)	42
MRO	72.9% (35)	8.3% (4)	6.3% (3)	4.2% (2)	6.3% (3)	2.1% (1)	48
NPCC	73.3% (33)	6.7% (3)	11.1% (5)	6.7% (3)	0.0% (0)	2.2% (1)	45
RFC	70.6% (36)	5.9% (3)	2.0% (1)	11.8% (6)	3.9% (2)	5.9% (3)	51
SERC	72.0% (36)	8.0% (4)	6.0% (3)	8.0% (4)	4.0% (2)	2.0% (1)	50
SPP	60.4% (32)	15.1% (8)	3.8% (2)	9.4% (5)	7.5% (4)	3.8% (2)	53
TRE	76.2% (32)	11.9% (5)	2.4% (1)	4.8% (2)	2.4% (1)	2.4% (1)	42
WECC	49.3% (34)	14.5% (10)	8.7% (6)	17.4% (12)	5.8% (4)	4.3% (3)	69
				Comments and recommendations:			42
						<i>answered question</i>	126
						<i>skipped question</i>	16

20. Penalties and sanctions bear a reasonable relation to the seriousness of the violation and the potential consequences to the reliability of the bulk power system, and consider the entity's timely remedial efforts (or lack thereof) and the quality of the entity's overall compliance efforts.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	26.5% (30)	10.6% (12)	15.9% (18)	23.0% (26)	16.8% (19)	7.1% (8)	113
FRCC	88.1% (37)	4.8% (2)	0.0% (0)	2.4% (1)	4.8% (2)	0.0% (0)	42
MRO	72.9% (35)	8.3% (4)	4.2% (2)	6.3% (3)	4.2% (2)	4.2% (2)	48
NPCC	72.7% (32)	4.5% (2)	6.8% (3)	9.1% (4)	4.5% (2)	2.3% (1)	44
RFC	69.2% (36)	3.8% (2)	5.8% (3)	15.4% (8)	1.9% (1)	3.8% (2)	52
SERC	72.0% (36)	4.0% (2)	12.0% (6)	6.0% (3)	4.0% (2)	2.0% (1)	50
SPP	69.8% (37)	9.4% (5)	5.7% (3)	9.4% (5)	5.7% (3)	0.0% (0)	53
TRE	78.6% (33)	7.1% (3)	7.1% (3)	4.8% (2)	2.4% (1)	0.0% (0)	42
WECC	53.5% (38)	11.3% (8)	5.6% (4)	19.7% (14)	7.0% (5)	2.8% (2)	71
				Comments and recommendations:			45
				<i>answered question</i>			123
				<i>skipped question</i>			19



21. Is effective in ensuring that a responsible entity that has violated a reliability standard develops and timely executes a mitigation plan that will (i) remedy the cause of the violation and (ii) prevent similar recurrences.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	37.5% (42)	18.8% (21)	17.9% (20)	18.8% (21)	6.3% (7)	0.9% (1)	112
FRCC	87.8% (36)	9.8% (4)	0.0% (0)	2.4% (1)	0.0% (0)	0.0% (0)	41
MRO	71.4% (35)	12.2% (6)	10.2% (5)	4.1% (2)	0.0% (0)	2.0% (1)	49
NPCC	77.3% (34)	11.4% (5)	6.8% (3)	0.0% (0)	2.3% (1)	2.3% (1)	44
RFC	63.0% (34)	14.8% (8)	3.7% (2)	11.1% (6)	5.6% (3)	1.9% (1)	54
SERC	73.5% (36)	20.4% (10)	2.0% (1)	2.0% (1)	0.0% (0)	2.0% (1)	49
SPP	73.6% (39)	17.0% (9)	1.9% (1)	3.8% (2)	1.9% (1)	1.9% (1)	53
TRE	85.7% (36)	14.3% (6)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	42
WECC	52.2% (36)	17.4% (12)	14.5% (10)	8.7% (6)	2.9% (2)	4.3% (3)	69
				Comments and recommendations:			31
						<i>answered question</i>	125
						<i>skipped question</i>	17

**22. Utilizes electronic tools and forms that provide for clear, effective, and efficient submittal and handling of compliance information.**

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	25.0% (27)	25.9% (28)	21.3% (23)	18.5% (20)	7.4% (8)	1.9% (2)	108
FRCC	81.4% (35)	7.0% (3)	2.3% (1)	7.0% (3)	2.3% (1)	0.0% (0)	43
MRO	62.7% (32)	13.7% (7)	13.7% (7)	7.8% (4)	2.0% (1)	0.0% (0)	51
NPCC	65.2% (30)	15.2% (7)	13.0% (6)	4.3% (2)	2.2% (1)	0.0% (0)	46
RFC	50.0% (28)	14.3% (8)	16.1% (9)	14.3% (8)	5.4% (3)	0.0% (0)	56
SERC	53.8% (28)	23.1% (12)	15.4% (8)	3.8% (2)	1.9% (1)	1.9% (1)	52
SPP	43.9% (25)	24.6% (14)	14.0% (8)	10.5% (6)	5.3% (3)	1.8% (1)	57
TRE	67.4% (29)	9.3% (4)	14.0% (6)	7.0% (3)	2.3% (1)	0.0% (0)	43
WECC	34.7% (25)	20.8% (15)	20.8% (15)	13.9% (10)	6.9% (5)	2.8% (2)	72
						Comments and recommendations:	44
						<i>answered question</i>	<b>125</b>
						<i>skipped question</i>	<b>17</b>

23. Provides clear options to owners, operators and users of the bulk power system to dispute alleged violations of reliability standards, proposed penalties and sanctions, proposed components of mitigation plans, and remedial action directives.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	31.0% (35)	23.0% (26)	15.9% (18)	22.1% (25)	7.1% (8)	0.9% (1)	113
FRCC	85.7% (36)	4.8% (2)	2.4% (1)	7.1% (3)	0.0% (0)	0.0% (0)	42
MRO	70.0% (35)	12.0% (6)	10.0% (5)	4.0% (2)	4.0% (2)	0.0% (0)	50
NPCC	77.8% (35)	11.1% (5)	2.2% (1)	6.7% (3)	2.2% (1)	0.0% (0)	45
RFC	63.0% (34)	14.8% (8)	7.4% (4)	11.1% (6)	1.9% (1)	1.9% (1)	54
SERC	70.6% (36)	15.7% (8)	5.9% (3)	5.9% (3)	2.0% (1)	0.0% (0)	51
SPP	68.5% (37)	16.7% (9)	0.0% (0)	9.3% (5)	1.9% (1)	3.7% (2)	54
TRE	81.0% (34)	9.5% (4)	2.4% (1)	4.8% (2)	0.0% (0)	2.4% (1)	42
WECC	48.6% (34)	18.6% (13)	11.4% (8)	18.6% (13)	1.4% (1)	1.4% (1)	70
				Comments and recommendations:			34
				<i>answered question</i>			125
				<i>skipped question</i>			17

24. Conduct of compliance inquiries and investigations by staff is professional, thorough, and efficient.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	39.8% (45)	21.2% (24)	13.3% (15)	15.9% (18)	8.0% (9)	1.8% (2)	113
FRCC	90.5% (38)	4.8% (2)	4.8% (2)	0.0% (0)	0.0% (0)	0.0% (0)	42
MRO	72.0% (36)	10.0% (5)	12.0% (6)	2.0% (1)	2.0% (1)	2.0% (1)	50
NPCC	80.0% (36)	15.6% (7)	2.2% (1)	0.0% (0)	2.2% (1)	0.0% (0)	45
RFC	65.5% (36)	14.5% (8)	5.5% (3)	10.9% (6)	3.6% (2)	0.0% (0)	55
SERC	72.5% (37)	15.7% (8)	7.8% (4)	2.0% (1)	2.0% (1)	0.0% (0)	51
SPP	60.7% (34)	26.8% (15)	3.6% (2)	5.4% (3)	1.8% (1)	1.8% (1)	56
TRE	76.2% (32)	14.3% (6)	7.1% (3)	2.4% (1)	0.0% (0)	0.0% (0)	42
WECC	57.1% (40)	18.6% (13)	11.4% (8)	8.6% (6)	4.3% (3)	0.0% (0)	70
						Comments and recommendations:	30
						<i>answered question</i>	126
						<i>skipped question</i>	16

**25. Comments and recommendations:**

	Response Count
	31
<i>answered question</i>	31
<i>skipped question</i>	111

## Organization Registration

26. Has established clear and adequate criteria to determine which owners, operators, and users of the bulk power system perform certain reliability functions and should therefore be registered as responsible for complying with reliability standards applicable to those reliability functions.							
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	5.2% (6)	20.7% (24)	26.7% (31)	13.8% (16)	23.3% (27)	10.3% (12)	116
FRCC	89.2% (33)	2.7% (1)	0.0% (0)	2.7% (1)	5.4% (2)	0.0% (0)	37
MRO	76.2% (32)	7.1% (3)	9.5% (4)	2.4% (1)	4.8% (2)	0.0% (0)	42
NPCC	76.9% (30)	2.6% (1)	7.7% (3)	5.1% (2)	5.1% (2)	2.6% (1)	39
RFC	68.8% (33)	4.2% (2)	6.3% (3)	8.3% (4)	10.4% (5)	2.1% (1)	48
SERC	63.0% (29)	10.9% (5)	15.2% (7)	6.5% (3)	2.2% (1)	2.2% (1)	46
SPP	62.2% (28)	13.3% (6)	8.9% (4)	2.2% (1)	8.9% (4)	4.4% (2)	45
TRE	78.9% (30)	2.6% (1)	5.3% (2)	5.3% (2)	2.6% (1)	5.3% (2)	38
WECC	44.8% (26)	10.3% (6)	19.0% (11)	3.4% (2)	10.3% (6)	12.1% (7)	58
					Comments and recommendations:		49
					<i>answered question</i>		123
					<i>skipped question</i>		19

27. The registration process is an effective means of providing due notice to bulk power system owners, operators, and users that they are responsible for complying with mandatory reliability standards.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	5.2% (6)	39.7% (46)	25.0% (29)	15.5% (18)	11.2% (13)	3.4% (4)	116
FRCC	89.2% (33)	2.7% (1)	2.7% (1)	5.4% (2)	0.0% (0)	0.0% (0)	37
MRO	73.8% (31)	16.7% (7)	4.8% (2)	2.4% (1)	2.4% (1)	0.0% (0)	42
NPCC	78.9% (30)	5.3% (2)	13.2% (5)	2.6% (1)	0.0% (0)	0.0% (0)	38
RFC	63.8% (30)	12.8% (6)	8.5% (4)	10.6% (5)	2.1% (1)	2.1% (1)	47
SERC	60.0% (27)	20.0% (9)	13.3% (6)	4.4% (2)	2.2% (1)	0.0% (0)	45
SPP	57.8% (26)	31.1% (14)	2.2% (1)	2.2% (1)	6.7% (3)	0.0% (0)	45
TRE	69.4% (25)	13.9% (5)	8.3% (3)	2.8% (1)	5.6% (2)	0.0% (0)	36
WECC	43.1% (25)	19.0% (11)	10.3% (6)	15.5% (9)	8.6% (5)	3.4% (2)	58
						Comments and recommendations:	30
						<i>answered question</i>	123
						<i>skipped question</i>	19

28. The registration process is effective in addressing situations in which compliance responsibilities are shared among entities, such as through the use of the Joint Registration Procedure.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	23.1% (27)	18.8% (22)	12.8% (15)	22.2% (26)	17.9% (21)	5.1% (6)	117
FRCC	89.2% (33)	2.7% (1)	5.4% (2)	0.0% (0)	2.7% (1)	0.0% (0)	37
MRO	75.6% (31)	12.2% (5)	2.4% (1)	2.4% (1)	7.3% (3)	0.0% (0)	41
NPCC	86.8% (33)	2.6% (1)	7.9% (3)	0.0% (0)	2.6% (1)	0.0% (0)	38
RFC	68.9% (31)	6.7% (3)	11.1% (5)	6.7% (3)	6.7% (3)	0.0% (0)	45
SERC	72.7% (32)	11.4% (5)	6.8% (3)	4.5% (2)	4.5% (2)	0.0% (0)	44
SPP	72.3% (34)	10.6% (5)	2.1% (1)	8.5% (4)	6.4% (3)	0.0% (0)	47
TRE	81.1% (30)	5.4% (2)	5.4% (2)	0.0% (0)	8.1% (3)	0.0% (0)	37
WECC	56.5% (35)	8.1% (5)	9.7% (6)	11.3% (7)	11.3% (7)	3.2% (2)	62
						Comments and recommendations:	33
						<i>answered question</i>	123
						<i>skipped question</i>	19



29. The registration process is effective for registered entities performing functions across more than one region.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	54.3% (63)	15.5% (18)	8.6% (10)	14.7% (17)	4.3% (5)	2.6% (3)	116
FRCC	89.2% (33)	0.0% (0)	2.7% (1)	2.7% (1)	2.7% (1)	2.7% (1)	37
MRO	73.8% (31)	9.5% (4)	2.4% (1)	7.1% (3)	4.8% (2)	2.4% (1)	42
NPCC	82.1% (32)	2.6% (1)	7.7% (3)	2.6% (1)	2.6% (1)	2.6% (1)	39
RFCC	68.9% (31)	8.9% (4)	11.1% (5)	6.7% (3)	2.2% (1)	2.2% (1)	45
SERC	72.7% (32)	11.4% (5)	6.8% (3)	4.5% (2)	2.3% (1)	2.3% (1)	44
SPP	75.0% (33)	6.8% (3)	6.8% (3)	4.5% (2)	4.5% (2)	2.3% (1)	44
TRE	75.7% (28)	5.4% (2)	10.8% (4)	2.7% (1)	2.7% (1)	2.7% (1)	37
WECC	82.0% (50)	1.6% (1)	3.3% (2)	6.6% (4)	4.9% (3)	1.6% (1)	61
Comments and recommendations:							25
<i>answered question</i>							<b>124</b>
<i>skipped question</i>							<b>18</b>

30. The registration process is effective for addressing joint registration by entities with shared or delegated compliance responsibilities.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	35.4% (40)	13.3% (15)	9.7% (11)	18.6% (21)	19.5% (22)	3.5% (4)	113
FRCC	91.7% (33)	0.0% (0)	0.0% (0)	5.6% (2)	2.8% (1)	0.0% (0)	36
MRO	73.8% (31)	7.1% (3)	2.4% (1)	7.1% (3)	9.5% (4)	0.0% (0)	42
NPCC	86.8% (33)	0.0% (0)	2.6% (1)	5.3% (2)	5.3% (2)	0.0% (0)	38
RFC	73.9% (34)	4.3% (2)	4.3% (2)	10.9% (5)	4.3% (2)	2.2% (1)	46
SERC	80.0% (36)	6.7% (3)	0.0% (0)	6.7% (3)	6.7% (3)	0.0% (0)	45
SPP	81.8% (36)	6.8% (3)	0.0% (0)	9.1% (4)	2.3% (1)	0.0% (0)	44
TRE	86.1% (31)	2.8% (1)	0.0% (0)	5.6% (2)	2.8% (1)	2.8% (1)	36
WECC	66.7% (40)	3.3% (2)	3.3% (2)	15.0% (9)	8.3% (5)	3.3% (2)	60
						Comments and recommendations:	28
						<i>answered question</i>	<b>122</b>
						<i>skipped question</i>	<b>20</b>

31. Comments and recommendations:

	Response Count
	13
<i>answered question</i>	13
<i>skipped question</i>	129

## Reliability Assessment

32. Is effective in performing accurate and independent assessments of the future reliability and adequacy of the bulk power system, and addressing in its reports substantive and timely issues that may impact future reliability.								
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count	
NERC	15.9% (18)	17.7% (20)	24.8% (28)	35.4% (40)	4.4% (5)	1.8% (2)	113	
FRCC	92.5% (37)	5.0% (2)	2.5% (1)	0.0% (0)	0.0% (0)	0.0% (0)	40	
MRO	77.8% (35)	6.7% (3)	8.9% (4)	6.7% (3)	0.0% (0)	0.0% (0)	45	
NPCC	78.6% (33)	14.3% (6)	2.4% (1)	4.8% (2)	0.0% (0)	0.0% (0)	42	
RFC	67.3% (33)	8.2% (4)	8.2% (4)	14.3% (7)	2.0% (1)	0.0% (0)	49	
SERC	71.7% (33)	13.0% (6)	2.2% (1)	13.0% (6)	0.0% (0)	0.0% (0)	46	
SPP	65.3% (32)	14.3% (7)	4.1% (2)	12.2% (6)	0.0% (0)	4.1% (2)	49	
TRE	82.9% (34)	7.3% (3)	2.4% (1)	4.9% (2)	0.0% (0)	2.4% (1)	41	
WECC	57.1% (36)	14.3% (9)	12.7% (8)	11.1% (7)	3.2% (2)	1.6% (1)	63	
						Comments and recommendations:	30	
						<i>answered question</i>	121	
						<i>skipped question</i>	21	

33. NERC is effective in reviewing, analyzing and reporting on regional self-assessments of electric supply and bulk power transmission reliability, including reliability issues of specific regional concern (applies to NERC only).

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	23.9% (28)	19.7% (23)	16.2% (19)	29.1% (34)	10.3% (12)	0.9% (1)	117
Comments and recommendations:							18
<i>answered question</i>							117
<i>skipped question</i>							25

34. Communicates the essential messages of its reliability assessments to stakeholders, regulators and policy makers, and the public, so as to effectively advocate for actions that are necessary or appropriate to ensure future adequacy and reliability of the bulk power system.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	9.7% (11)	26.5% (30)	30.1% (34)	23.0% (26)	8.8% (10)	1.8% (2)	113
FRCC	86.8% (33)	5.3% (2)	2.6% (1)	2.6% (1)	2.6% (1)	0.0% (0)	38
MRO	72.1% (31)	9.3% (4)	9.3% (4)	4.7% (2)	4.7% (2)	0.0% (0)	43
NPCC	71.8% (28)	10.3% (4)	15.4% (6)	2.6% (1)	0.0% (0)	0.0% (0)	39
RFCC	63.8% (30)	8.5% (4)	10.6% (5)	17.0% (8)	0.0% (0)	0.0% (0)	47
SERC	65.9% (29)	13.6% (6)	11.4% (5)	4.5% (2)	0.0% (0)	4.5% (2)	44
SPP	53.1% (26)	22.4% (11)	16.3% (8)	6.1% (3)	0.0% (0)	2.0% (1)	49
TRE	76.3% (29)	7.9% (3)	10.5% (4)	5.3% (2)	0.0% (0)	0.0% (0)	38
WECC	45.0% (27)	20.0% (12)	13.3% (8)	11.7% (7)	6.7% (4)	3.3% (2)	60
						Comments and recommendations:	21
						<i>answered question</i>	119
						<i>skipped question</i>	23

35. Comments and recommendations:

	Response Count
	14
<i>answered question</i>	14
<i>skipped question</i>	128

## Performance Analysis and Metrics

36. Has developed and is publishing and disseminating information on performance metrics and benchmarks that are useful to observing and understanding trends in the reliability of the bulk power system and in the reliability performance of users, owners and operators, and in highlighting areas for improvement.								
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count	
NERC	14.9% (17)	18.4% (21)	15.8% (18)	25.4% (29)	21.1% (24)	4.4% (5)	114	
FRCC	89.5% (34)	2.6% (1)	0.0% (0)	7.9% (3)	0.0% (0)	0.0% (0)	38	
MRO	79.1% (34)	9.3% (4)	0.0% (0)	4.7% (2)	7.0% (3)	0.0% (0)	43	
NPCC	80.5% (33)	7.3% (3)	2.4% (1)	9.8% (4)	0.0% (0)	0.0% (0)	41	
RFC	70.8% (34)	8.3% (4)	0.0% (0)	12.5% (6)	6.3% (3)	2.1% (1)	48	
SERC	73.3% (33)	11.1% (5)	4.4% (2)	4.4% (2)	6.7% (3)	0.0% (0)	45	
SPP	60.0% (30)	16.0% (8)	4.0% (2)	10.0% (5)	8.0% (4)	2.0% (1)	50	
TRE	79.5% (31)	10.3% (4)	2.6% (1)	5.1% (2)	2.6% (1)	0.0% (0)	39	
WECC	49.2% (31)	15.9% (10)	7.9% (5)	12.7% (8)	11.1% (7)	3.2% (2)	63	
						Comments and recommendations:	31	
						<i>answered question</i>	119	
						<i>skipped question</i>	23	



## Training, Education and Personnel Certification

37. Has developed and implemented training and education programs on the requirements of reliability standards and the actions and documentation needed to demonstrate compliance and other topics to facilitate compliance and promote reliability of the bulk power system.							
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	11.6% (13)	17.0% (19)	<b>24.1% (27)</b>	20.5% (23)	20.5% (23)	6.3% (7)	112
FRCC	<b>78.9% (30)</b>	2.6% (1)	2.6% (1)	5.3% (2)	10.5% (4)	0.0% (0)	38
MRO	<b>60.0% (27)</b>	6.7% (3)	6.7% (3)	11.1% (5)	13.3% (6)	2.2% (1)	45
NPCC	<b>65.0% (26)</b>	7.5% (3)	17.5% (7)	2.5% (1)	5.0% (2)	2.5% (1)	40
RFC	<b>52.0% (26)</b>	6.0% (3)	10.0% (5)	12.0% (6)	16.0% (8)	4.0% (2)	50
SERC	<b>53.2% (25)</b>	17.0% (8)	19.1% (9)	4.3% (2)	4.3% (2)	2.1% (1)	47
SPP	<b>45.3% (24)</b>	30.2% (16)	13.2% (7)	5.7% (3)	3.8% (2)	1.9% (1)	53
TRE	<b>71.1% (27)</b>	10.5% (4)	7.9% (3)	5.3% (2)	5.3% (2)	0.0% (0)	38
WECC	<b>33.3% (22)</b>	13.6% (9)	25.8% (17)	18.2% (12)	9.1% (6)	0.0% (0)	66
					Comments and recommendations:		43
					<i>answered question</i>		<b>122</b>
					<i>skipped question</i>		<b>20</b>

38. Has established and implemented an effective program for issuing certification credentials to, and maintenance of the certification credentials by, operating personnel of owners, operators and users of the bulk power system (applies to NERC only, unless Region has a personnel certification program).

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	33.9% (38)	28.6% (32)	15.2% (17)	16.1% (18)	6.3% (7)	0.0% (0)	112
FRCC	94.1% (32)	2.9% (1)	0.0% (0)	0.0% (0)	2.9% (1)	0.0% (0)	34
MRO	91.9% (34)	8.1% (3)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	37
NPCC	97.1% (34)	2.9% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	35
RFC	88.6% (39)	4.5% (2)	2.3% (1)	4.5% (2)	0.0% (0)	0.0% (0)	44
SERC	86.8% (33)	13.2% (5)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	38
SPP	78.0% (32)	17.1% (7)	2.4% (1)	2.4% (1)	0.0% (0)	0.0% (0)	41
TRE	91.4% (32)	5.7% (2)	2.9% (1)	0.0% (0)	0.0% (0)	0.0% (0)	35
WECC	79.2% (38)	10.4% (5)	0.0% (0)	8.3% (4)	2.1% (1)	0.0% (0)	48
				Comments and recommendations:			22
					<i>answered question</i>		117
					<i>skipped question</i>		25

39. Has established and implemented a program to promote quality and improvements in continuing education and training programs offered by owners, operators and users of the bulk power system to their operating personnel, including developing and maintaining a process to approve continuing education and training providers by establishing requirements for, and conducting periodic audits of, such providers and activities.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	25.9% (29)	26.8% (30)	17.0% (19)	22.3% (25)	7.1% (8)	0.9% (1)	112
FRCC	86.1% (31)	5.6% (2)	0.0% (0)	5.6% (2)	2.8% (1)	0.0% (0)	36
MRO	76.9% (30)	7.7% (3)	2.6% (1)	2.6% (1)	10.3% (4)	0.0% (0)	39
NPCC	83.8% (31)	5.4% (2)	2.7% (1)	2.7% (1)	5.4% (2)	0.0% (0)	37
RFC	73.3% (33)	6.7% (3)	6.7% (3)	8.9% (4)	2.2% (1)	2.2% (1)	45
SERC	73.2% (30)	14.6% (6)	4.9% (2)	4.9% (2)	2.4% (1)	0.0% (0)	41
SPP	59.6% (28)	25.5% (12)	6.4% (3)	4.3% (2)	2.1% (1)	2.1% (1)	47
TRE	80.6% (29)	8.3% (3)	5.6% (2)	2.8% (1)	2.8% (1)	0.0% (0)	36
WECC	58.2% (32)	12.7% (7)	7.3% (4)	16.4% (9)	5.5% (3)	0.0% (0)	55
						Comments and recommendations:	25
						<i>answered question</i>	<b>118</b>
						<i>skipped question</i>	<b>24</b>

40. Comments and recommendations:

	Response Count
	9
<i>answered question</i>	9
<i>skipped question</i>	133

## Event Analysis

41. Develops and disseminates timely and useful information on system events that occur on the bulk power system, including information on root causes and lessons learned that is helpful to owners, operators and users in taking steps to prevent recurrence.								
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count	
NERC	12.6% (14)	20.7% (23)	23.4% (26)	<b>24.3% (27)</b>	14.4% (16)	4.5% (5)	111	
FRCC	<b>81.6% (31)</b>	5.3% (2)	10.5% (4)	2.6% (1)	0.0% (0)	0.0% (0)	38	
MRO	<b>70.7% (29)</b>	4.9% (2)	9.8% (4)	12.2% (5)	0.0% (0)	2.4% (1)	41	
NPCC	<b>74.4% (29)</b>	5.1% (2)	15.4% (6)	2.6% (1)	0.0% (0)	2.6% (1)	39	
RFC	<b>64.6% (31)</b>	4.2% (2)	12.5% (6)	10.4% (5)	8.3% (4)	0.0% (0)	48	
SERC	<b>67.4% (29)</b>	9.3% (4)	16.3% (7)	4.7% (2)	2.3% (1)	0.0% (0)	43	
SPP	<b>63.3% (31)</b>	10.2% (5)	12.2% (6)	12.2% (6)	2.0% (1)	0.0% (0)	49	
TRE	<b>69.2% (27)</b>	10.3% (4)	12.8% (5)	5.1% (2)	2.6% (1)	0.0% (0)	39	
WECC	<b>47.5% (29)</b>	19.7% (12)	19.7% (12)	8.2% (5)	4.9% (3)	0.0% (0)	61	
						Comments and recommendations:	30	
						<i>answered question</i>	<b>119</b>	
						<i>skipped question</i>	<b>23</b>	

42. Develops and disseminates timely and useful alerts on risks and uncertainties potentially affecting reliable operation of the bulk power system, that are helpful to owners, operators and users in taking steps to preserve or improve reliability.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	6.1% (7)	25.2% (29)	27.0% (31)	<b>28.7% (33)</b>	7.8% (9)	5.2% (6)	115
FRCC	<b>83.8% (31)</b>	2.7% (1)	5.4% (2)	2.7% (1)	5.4% (2)	0.0% (0)	37
MRO	<b>78.0% (32)</b>	4.9% (2)	7.3% (3)	7.3% (3)	2.4% (1)	0.0% (0)	41
NPCC	<b>74.4% (29)</b>	2.6% (1)	12.8% (5)	7.7% (3)	2.6% (1)	0.0% (0)	39
RFC	<b>70.2% (33)</b>	2.1% (1)	10.6% (5)	10.6% (5)	6.4% (3)	0.0% (0)	47
SERC	<b>69.8% (30)</b>	7.0% (3)	11.6% (5)	7.0% (3)	4.7% (2)	0.0% (0)	43
SPP	<b>63.3% (31)</b>	16.3% (8)	8.2% (4)	8.2% (4)	4.1% (2)	0.0% (0)	49
TRE	<b>71.1% (27)</b>	10.5% (4)	7.9% (3)	5.3% (2)	5.3% (2)	0.0% (0)	38
WECC	<b>45.0% (27)</b>	18.3% (11)	16.7% (10)	15.0% (9)	5.0% (3)	0.0% (0)	60
						Comments and recommendations:	44
						<i>answered question</i>	<b>121</b>
						<i>skipped question</i>	<b>21</b>

43. Provides an effective means of tracking recommendations to ensure completion as needed to ensure reliability of the bulk power system.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	30.0% (33)	17.3% (19)	15.5% (17)	29.1% (32)	6.4% (7)	1.8% (2)	110
FRCC	91.9% (34)	5.4% (2)	0.0% (0)	2.7% (1)	0.0% (0)	0.0% (0)	37
MRO	80.5% (33)	4.9% (2)	7.3% (3)	2.4% (1)	4.9% (2)	0.0% (0)	41
NPCC	75.0% (30)	2.5% (1)	12.5% (5)	7.5% (3)	2.5% (1)	0.0% (0)	40
RFC	76.6% (36)	2.1% (1)	4.3% (2)	14.9% (7)	2.1% (1)	0.0% (0)	47
SERC	79.1% (34)	4.7% (2)	4.7% (2)	7.0% (3)	4.7% (2)	0.0% (0)	43
SPP	68.0% (34)	14.0% (7)	12.0% (6)	6.0% (3)	0.0% (0)	0.0% (0)	50
TRE	76.9% (30)	7.7% (3)	5.1% (2)	7.7% (3)	2.6% (1)	0.0% (0)	39
WECC	52.5% (32)	8.2% (5)	19.7% (12)	18.0% (11)	1.6% (1)	0.0% (0)	61
				Comments and recommendations:			20
						<i>answered question</i>	118
						<i>skipped question</i>	24

**44. Comments and recommendations:**

	Response Count
	12
<i>answered question</i>	12
<i>skipped question</i>	130



## Critical Infrastructure Protection

45. Has been effective as a leader and facilitator of the industry's efforts to identify and protect bulk power system critical infrastructure, including by identifying and publicizing threats to critical infrastructure.								
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count	
NERC	7.8% (9)	22.4% (26)	31.9% (37)	26.7% (31)	9.5% (11)	1.7% (2)	116	
FRCC	89.5% (34)	2.6% (1)	0.0% (0)	5.3% (2)	2.6% (1)	0.0% (0)	38	
MRO	81.0% (34)	7.1% (3)	2.4% (1)	4.8% (2)	4.8% (2)	0.0% (0)	42	
NPCC	80.0% (32)	7.5% (3)	5.0% (2)	5.0% (2)	2.5% (1)	0.0% (0)	40	
RFCC	75.0% (36)	6.3% (3)	6.3% (3)	12.5% (6)	0.0% (0)	0.0% (0)	48	
SERC	75.0% (33)	13.6% (6)	6.8% (3)	2.3% (1)	2.3% (1)	0.0% (0)	44	
SPP	63.3% (31)	20.4% (10)	10.2% (5)	6.1% (3)	0.0% (0)	0.0% (0)	49	
TRE	81.6% (31)	7.9% (3)	2.6% (1)	7.9% (3)	0.0% (0)	0.0% (0)	38	
WECC	46.8% (29)	11.3% (7)	22.6% (14)	14.5% (9)	3.2% (2)	1.6% (1)	62	
						Comments and recommendations:	28	
						<i>answered question</i>	120	
						<i>skipped question</i>	22	

46. Provides cyber security alerts that are effective for notifying bulk power system owners, operators, and users of vulnerabilities and actions to address those vulnerabilities.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	7.8% (9)	31.0% (36)	26.7% (31)	19.0% (22)	11.2% (13)	4.3% (5)	116
FRCC	86.8% (33)	5.3% (2)	2.6% (1)	2.6% (1)	2.6% (1)	0.0% (0)	38
MRO	78.6% (33)	7.1% (3)	2.4% (1)	9.5% (4)	2.4% (1)	0.0% (0)	42
NPCC	75.6% (31)	9.8% (4)	7.3% (3)	2.4% (1)	4.9% (2)	0.0% (0)	41
RFC	70.8% (34)	8.3% (4)	6.3% (3)	12.5% (6)	2.1% (1)	0.0% (0)	48
SERC	72.7% (32)	11.4% (5)	6.8% (3)	6.8% (3)	2.3% (1)	0.0% (0)	44
SPP	63.3% (31)	20.4% (10)	8.2% (4)	6.1% (3)	2.0% (1)	0.0% (0)	49
TRE	73.7% (28)	10.5% (4)	5.3% (2)	5.3% (2)	5.3% (2)	0.0% (0)	38
WECC	53.3% (32)	11.7% (7)	16.7% (10)	15.0% (9)	3.3% (2)	0.0% (0)	60
						Comments and recommendations:	39
						<i>answered question</i>	<b>120</b>
						<i>skipped question</i>	<b>22</b>

47. Provides useful guidance and information on how to comply with requirements of the CIP reliability standards.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	11.5% (13)	15.0% (17)	15.0% (17)	<b>30.1% (34)</b>	24.8% (28)	3.5% (4)	113
FRCC	<b>89.5% (34)</b>	2.6% (1)	0.0% (0)	5.3% (2)	2.6% (1)	0.0% (0)	38
MRO	<b>78.6% (33)</b>	4.8% (2)	0.0% (0)	11.9% (5)	2.4% (1)	2.4% (1)	42
NPCC	<b>73.2% (30)</b>	4.9% (2)	9.8% (4)	9.8% (4)	2.4% (1)	0.0% (0)	41
RFC	<b>68.8% (33)</b>	2.1% (1)	4.2% (2)	14.6% (7)	8.3% (4)	2.1% (1)	48
SERC	<b>70.5% (31)</b>	4.5% (2)	13.6% (6)	9.1% (4)	2.3% (1)	0.0% (0)	44
SPP	<b>57.1% (28)</b>	20.4% (10)	8.2% (4)	12.2% (6)	2.0% (1)	0.0% (0)	49
TRE	<b>75.7% (28)</b>	5.4% (2)	8.1% (3)	10.8% (4)	0.0% (0)	0.0% (0)	37
WECC	<b>41.5% (27)</b>	20.0% (13)	15.4% (10)	13.8% (9)	9.2% (6)	0.0% (0)	65
				Comments and recommendations:			39
					<i>answered question</i>		<b>119</b>
					<i>skipped question</i>		<b>23</b>

48. Comments and recommendations:

	Response Count
	14
<i>answered question</i>	14
<i>skipped question</i>	128

## Situation Awareness

49. Provides useful information on system conditions in a timely manner to owners, operators and users and other interested entities during both normal and off-normal or emergency conditions.								
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count	
NERC	34.0% (36)	13.2% (14)	16.0% (17)	27.4% (29)	5.7% (6)	3.8% (4)	106	
FRCC	91.9% (34)	5.4% (2)	2.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	37	
MRO	77.5% (31)	5.0% (2)	10.0% (4)	0.0% (0)	5.0% (2)	2.5% (1)	40	
NPCC	82.5% (33)	2.5% (1)	12.5% (5)	2.5% (1)	0.0% (0)	0.0% (0)	40	
RFC	78.7% (37)	2.1% (1)	6.4% (3)	10.6% (5)	2.1% (1)	0.0% (0)	47	
SERC	83.7% (36)	4.7% (2)	4.7% (2)	4.7% (2)	2.3% (1)	0.0% (0)	43	
SPP	64.0% (32)	14.0% (7)	12.0% (6)	8.0% (4)	0.0% (0)	2.0% (1)	50	
TRE	83.8% (31)	8.1% (3)	2.7% (1)	2.7% (1)	2.7% (1)	0.0% (0)	37	
WECC	50.0% (31)	9.7% (6)	19.4% (12)	19.4% (12)	1.6% (1)	0.0% (0)	62	
						Comments and recommendations:	27	
						<i>answered question</i>	<b>114</b>	
						<i>skipped question</i>	<b>28</b>	

## Stakeholder Communications and Public Relations

50. Provides a public and/or non-public website that is useful in meeting stakeholder needs and provides easy access to information.								
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count	
NERC	2.6% (3)	27.8% (32)	<b>34.8% (40)</b>	24.3% (28)	8.7% (10)	1.7% (2)	115	
FRCC	<b>81.6% (31)</b>	5.3% (2)	7.9% (3)	5.3% (2)	0.0% (0)	0.0% (0)	38	
MRO	<b>64.4% (29)</b>	6.7% (3)	17.8% (8)	8.9% (4)	0.0% (0)	2.2% (1)	45	
NPCC	<b>63.4% (26)</b>	9.8% (4)	19.5% (8)	7.3% (3)	0.0% (0)	0.0% (0)	41	
RFC	<b>51.0% (25)</b>	8.2% (4)	24.5% (12)	14.3% (7)	2.0% (1)	0.0% (0)	49	
SERC	<b>55.6% (25)</b>	15.6% (7)	22.2% (10)	4.4% (2)	2.2% (1)	0.0% (0)	45	
SPP	<b>46.2% (24)</b>	26.9% (14)	9.6% (5)	9.6% (5)	7.7% (4)	0.0% (0)	52	
TRE	<b>65.8% (25)</b>	10.5% (4)	7.9% (3)	7.9% (3)	7.9% (3)	0.0% (0)	38	
WECC	<b>29.2% (19)</b>	23.1% (15)	23.1% (15)	16.9% (11)	6.2% (4)	1.5% (1)	65	
					Comments and recommendations:		38	
					<i>answered question</i>		<b>119</b>	
					<i>skipped question</i>		<b>23</b>	

51. Provides newsletters, conferences, and other stakeholder communications that are effective in providing stakeholders with useful and timely information regarding reliability and ERO/RE activities.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	8.0% (9)	33.0% (37)	33.0% (37)	21.4% (24)	4.5% (5)	0.0% (0)	112
FRCC	84.2% (32)	5.3% (2)	5.3% (2)	5.3% (2)	0.0% (0)	0.0% (0)	38
MRO	64.4% (29)	15.6% (7)	8.9% (4)	6.7% (3)	4.4% (2)	0.0% (0)	45
NPCC	68.3% (28)	12.2% (5)	14.6% (6)	4.9% (2)	0.0% (0)	0.0% (0)	41
RFC	51.0% (25)	12.2% (6)	26.5% (13)	10.2% (5)	0.0% (0)	0.0% (0)	49
SERC	55.6% (25)	22.2% (10)	15.6% (7)	6.7% (3)	0.0% (0)	0.0% (0)	45
SPP	46.2% (24)	32.7% (17)	15.4% (8)	5.8% (3)	0.0% (0)	0.0% (0)	52
TRE	66.7% (26)	15.4% (6)	10.3% (4)	7.7% (3)	0.0% (0)	0.0% (0)	39
WECC	35.4% (23)	30.8% (20)	21.5% (14)	9.2% (6)	3.1% (2)	0.0% (0)	65
						Comments and recommendations:	24
						<i>answered question</i>	118
						<i>skipped question</i>	24

52. Provides effective outreach to all jurisdictional stakeholders, including smaller entities with limited ability to travel to meetings and conferences.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	18.2% (20)	19.1% (21)	22.7% (25)	<b>23.6% (26)</b>	14.5% (16)	1.8% (2)	110
FRCC	<b>86.5% (32)</b>	5.4% (2)	5.4% (2)	2.7% (1)	0.0% (0)	0.0% (0)	37
MRO	<b>74.4% (32)</b>	7.0% (3)	7.0% (3)	9.3% (4)	2.3% (1)	0.0% (0)	43
NPCC	<b>75.0% (30)</b>	12.5% (5)	5.0% (2)	7.5% (3)	0.0% (0)	0.0% (0)	40
RFCC	<b>63.8% (30)</b>	12.8% (6)	12.8% (6)	8.5% (4)	2.1% (1)	0.0% (0)	47
SERC	<b>66.7% (30)</b>	15.6% (7)	11.1% (5)	6.7% (3)	0.0% (0)	0.0% (0)	45
SPP	<b>53.1% (26)</b>	20.4% (10)	12.2% (6)	4.1% (2)	10.2% (5)	0.0% (0)	49
TRE	<b>76.3% (29)</b>	13.2% (5)	5.3% (2)	2.6% (1)	2.6% (1)	0.0% (0)	38
WECC	<b>35.9% (23)</b>	18.8% (12)	18.8% (12)	14.1% (9)	12.5% (8)	0.0% (0)	64
				Comments and recommendations:			27
				<i>answered question</i>			<b>119</b>
				<i>skipped question</i>			<b>23</b>



53. Comments and recommendations:

	Response Count
	11
<i>answered question</i>	11
<i>skipped question</i>	131

## Finance and Controls

54. Provides reasonable opportunity for members and other stakeholders to provide input in the annual budgeting process and takes member/stakeholder input into account in developing final budgets for submission to FERC.								
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count	
NERC	28.7% (31)	25.0% (27)	14.8% (16)	21.3% (23)	8.3% (9)	1.9% (2)	108	
FRCC	89.2% (33)	5.4% (2)	2.7% (1)	2.7% (1)	0.0% (0)	0.0% (0)	37	
MRO	75.0% (33)	11.4% (5)	4.5% (2)	4.5% (2)	2.3% (1)	2.3% (1)	44	
NPCC	81.6% (31)	10.5% (4)	2.6% (1)	5.3% (2)	0.0% (0)	0.0% (0)	38	
RFC	61.7% (29)	8.5% (4)	19.1% (9)	10.6% (5)	0.0% (0)	0.0% (0)	47	
SERC	76.7% (33)	9.3% (4)	9.3% (4)	4.7% (2)	0.0% (0)	0.0% (0)	43	
SPP	69.4% (34)	10.2% (5)	12.2% (6)	6.1% (3)	2.0% (1)	0.0% (0)	49	
TRE	81.1% (30)	8.1% (3)	8.1% (3)	2.7% (1)	0.0% (0)	0.0% (0)	37	
WECC	63.9% (39)	9.8% (6)	3.3% (2)	9.8% (6)	9.8% (6)	3.3% (2)	61	
						Comments and recommendations:	17	
						<i>answered question</i>	114	
						<i>skipped question</i>	28	

55. Operating costs are fairly allocated to bulk power system users.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	35.8% (38)	20.8% (22)	17.9% (19)	21.7% (23)	2.8% (3)	0.9% (1)	106
FRCC	83.8% (31)	10.8% (4)	2.7% (1)	2.7% (1)	0.0% (0)	0.0% (0)	37
MRO	79.1% (34)	7.0% (3)	4.7% (2)	9.3% (4)	0.0% (0)	0.0% (0)	43
NPCC	78.9% (30)	7.9% (3)	7.9% (3)	5.3% (2)	0.0% (0)	0.0% (0)	38
RFCC	70.2% (33)	6.4% (3)	10.6% (5)	12.8% (6)	0.0% (0)	0.0% (0)	47
SERC	78.6% (33)	9.5% (4)	9.5% (4)	2.4% (1)	0.0% (0)	0.0% (0)	42
SPP	60.4% (29)	16.7% (8)	14.6% (7)	6.3% (3)	0.0% (0)	2.1% (1)	48
TRE	78.4% (29)	10.8% (4)	8.1% (3)	2.7% (1)	0.0% (0)	0.0% (0)	37
WECC	58.1% (36)	14.5% (9)	9.7% (6)	11.3% (7)	6.5% (4)	0.0% (0)	62
						Comments and recommendations:	15
						<i>answered question</i>	116
						<i>skipped question</i>	26

56. Provides acceptable levels of financial information in its business plans and financial reporting.							
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	33.6% (36)	23.4% (25)	17.8% (19)	22.4% (24)	1.9% (2)	0.9% (1)	107
FRCC	88.9% (32)	8.3% (3)	2.8% (1)	0.0% (0)	0.0% (0)	0.0% (0)	36
MRO	81.0% (34)	4.8% (2)	4.8% (2)	7.1% (3)	2.4% (1)	0.0% (0)	42
NPCC	73.7% (28)	7.9% (3)	15.8% (6)	2.6% (1)	0.0% (0)	0.0% (0)	38
RFC	63.0% (29)	8.7% (4)	17.4% (8)	10.9% (5)	0.0% (0)	0.0% (0)	46
SERC	78.0% (32)	12.2% (5)	7.3% (3)	0.0% (0)	0.0% (0)	2.4% (1)	41
SPP	70.2% (33)	17.0% (8)	4.3% (2)	8.5% (4)	0.0% (0)	0.0% (0)	47
TRE	77.8% (28)	11.1% (4)	8.3% (3)	2.8% (1)	0.0% (0)	0.0% (0)	36
WECC	65.0% (39)	15.0% (9)	5.0% (3)	10.0% (6)	3.3% (2)	1.7% (1)	60
					Comments and recommendations:		11
					<i>answered question</i>		114
					<i>skipped question</i>		28

57. Comments and recommendations:

	Response Count
	11
<i>answered question</i>	11
<i>skipped question</i>	131

## Information Technology

58. Information systems, services and facilities meet the needs of Registered Entities and other stakeholders.							
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	16.5% (18)	18.3% (20)	29.4% (32)	23.9% (26)	11.0% (12)	0.9% (1)	109
FRCC	89.2% (33)	5.4% (2)	2.7% (1)	2.7% (1)	0.0% (0)	0.0% (0)	37
MRO	68.2% (30)	9.1% (4)	11.4% (5)	6.8% (3)	4.5% (2)	0.0% (0)	44
NPCC	71.8% (28)	15.4% (6)	5.1% (2)	5.1% (2)	2.6% (1)	0.0% (0)	39
RFC	55.3% (26)	10.6% (5)	17.0% (8)	10.6% (5)	6.4% (3)	0.0% (0)	47
SERC	60.5% (26)	23.3% (10)	9.3% (4)	4.7% (2)	2.3% (1)	0.0% (0)	43
SPP	51.0% (25)	24.5% (12)	16.3% (8)	8.2% (4)	0.0% (0)	0.0% (0)	49
TRE	73.0% (27)	13.5% (5)	5.4% (2)	8.1% (3)	0.0% (0)	0.0% (0)	37
WECC	40.3% (25)	11.3% (7)	19.4% (12)	24.2% (15)	3.2% (2)	1.6% (1)	62
						Comments and recommendations:	26
						<i>answered question</i>	116
						<i>skipped question</i>	26

## Overall Satisfaction

59. Staff is qualified, competent, well-prepared, and organized in the conduct of its statutory functions and in its communications with stakeholders.								
	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count	
NERC	6.4% (7)	32.7% (36)	29.1% (32)	26.4% (29)	4.5% (5)	0.9% (1)	110	
FRCC	82.1% (32)	7.7% (3)	5.1% (2)	5.1% (2)	0.0% (0)	0.0% (0)	39	
MRO	61.7% (29)	14.9% (7)	12.8% (6)	10.6% (5)	0.0% (0)	0.0% (0)	47	
NPCC	60.5% (26)	18.6% (8)	14.0% (6)	4.7% (2)	2.3% (1)	0.0% (0)	43	
RFC	51.0% (26)	19.6% (10)	17.6% (9)	9.8% (5)	2.0% (1)	0.0% (0)	51	
SERC	55.1% (27)	20.4% (10)	20.4% (10)	4.1% (2)	0.0% (0)	0.0% (0)	49	
SPP	43.4% (23)	34.0% (18)	18.9% (10)	3.8% (2)	0.0% (0)	0.0% (0)	53	
TRE	65.0% (26)	15.0% (6)	7.5% (3)	12.5% (5)	0.0% (0)	0.0% (0)	40	
WECC	32.3% (21)	20.0% (13)	20.0% (13)	16.9% (11)	9.2% (6)	1.5% (1)	65	
						Comments and recommendations:	36	
						<i>answered question</i>	<b>118</b>	
						<i>skipped question</i>	<b>24</b>	

60. Staff is timely and responsive in meeting the needs of reliability stakeholders and addressing issues affecting the reliability of the bulk power system.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	13.1% (14)	26.2% (28)	21.5% (23)	30.8% (33)	7.5% (8)	0.9% (1)	107
FRCC	84.2% (32)	7.9% (3)	2.6% (1)	5.3% (2)	0.0% (0)	0.0% (0)	38
MRO	62.2% (28)	15.6% (7)	11.1% (5)	8.9% (4)	2.2% (1)	0.0% (0)	45
NPCC	65.9% (27)	17.1% (7)	4.9% (2)	12.2% (5)	0.0% (0)	0.0% (0)	41
RFC	53.1% (26)	16.3% (8)	14.3% (7)	14.3% (7)	2.0% (1)	0.0% (0)	49
SERC	56.3% (27)	27.1% (13)	4.2% (2)	10.4% (5)	2.1% (1)	0.0% (0)	48
SPP	48.0% (24)	30.0% (15)	10.0% (5)	12.0% (6)	0.0% (0)	0.0% (0)	50
TRE	71.8% (28)	10.3% (4)	5.1% (2)	7.7% (3)	5.1% (2)	0.0% (0)	39
WECC	34.9% (22)	19.0% (12)	11.1% (7)	20.6% (13)	14.3% (9)	0.0% (0)	63
				Comments and recommendations:			30
				<i>answered question</i>			117
				<i>skipped question</i>			25



61. Staff effectively communicates a vision and expectations and provides effective leadership to achieve that vision.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	11.2% (12)	24.3% (26)	15.0% (16)	35.5% (38)	10.3% (11)	3.7% (4)	107
FRCC	87.2% (34)	5.1% (2)	2.6% (1)	5.1% (2)	0.0% (0)	0.0% (0)	39
MRO	69.6% (32)	10.9% (5)	6.5% (3)	6.5% (3)	4.3% (2)	2.2% (1)	46
NPCC	71.4% (30)	9.5% (4)	9.5% (4)	9.5% (4)	0.0% (0)	0.0% (0)	42
RFC	60.8% (31)	7.8% (4)	17.6% (9)	11.8% (6)	0.0% (0)	2.0% (1)	51
SERC	65.2% (30)	15.2% (7)	10.9% (5)	8.7% (4)	0.0% (0)	0.0% (0)	46
SPP	54.9% (28)	25.5% (13)	11.8% (6)	7.8% (4)	0.0% (0)	0.0% (0)	51
TRE	79.5% (31)	5.1% (2)	7.7% (3)	5.1% (2)	2.6% (1)	0.0% (0)	39
WECC	39.1% (25)	15.6% (10)	9.4% (6)	21.9% (14)	9.4% (6)	4.7% (3)	64
				Comments and recommendations:			19
					<i>answered question</i>		115
					<i>skipped question</i>		27

62. Organization is open and transparent in the conduct of its statutory functions.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	9.3% (10)	27.1% (29)	23.4% (25)	29.9% (32)	8.4% (9)	1.9% (2)	107
FRCC	86.5% (32)	2.7% (1)	0.0% (0)	5.4% (2)	5.4% (2)	0.0% (0)	37
MRO	66.7% (30)	11.1% (5)	8.9% (4)	6.7% (3)	6.7% (3)	0.0% (0)	45
NPCC	70.7% (29)	17.1% (7)	2.4% (1)	4.9% (2)	4.9% (2)	0.0% (0)	41
RFC	57.1% (28)	8.2% (4)	16.3% (8)	12.2% (6)	4.1% (2)	2.0% (1)	49
SERC	59.6% (28)	23.4% (11)	8.5% (4)	4.3% (2)	4.3% (2)	0.0% (0)	47
SPP	51.0% (26)	29.4% (15)	9.8% (5)	3.9% (2)	3.9% (2)	2.0% (1)	51
TRE	73.7% (28)	7.9% (3)	7.9% (3)	5.3% (2)	2.6% (1)	2.6% (1)	38
WECC	38.7% (24)	14.5% (9)	19.4% (12)	16.1% (10)	11.3% (7)	0.0% (0)	62
				Comments and recommendations:			23
					<i>answered question</i>		115
					<i>skipped question</i>		27

63. Organization and staff are sufficiently independent of owners, operators, and users to effectively perform statutory duties with objectivity and integrity.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	7.4% (8)	49.1% (53)	27.8% (30)	14.8% (16)	0.9% (1)	0.0% (0)	108
FRCC	81.6% (31)	10.5% (4)	2.6% (1)	5.3% (2)	0.0% (0)	0.0% (0)	38
MRO	60.9% (28)	21.7% (10)	13.0% (6)	4.3% (2)	0.0% (0)	0.0% (0)	46
NPCC	68.3% (28)	19.5% (8)	9.8% (4)	2.4% (1)	0.0% (0)	0.0% (0)	41
RFC	53.1% (26)	24.5% (12)	14.3% (7)	8.2% (4)	0.0% (0)	0.0% (0)	49
SERC	55.3% (26)	27.7% (13)	10.6% (5)	6.4% (3)	0.0% (0)	0.0% (0)	47
SPP	47.1% (24)	31.4% (16)	9.8% (5)	9.8% (5)	2.0% (1)	0.0% (0)	51
TRE	71.1% (27)	15.8% (6)	7.9% (3)	5.3% (2)	0.0% (0)	0.0% (0)	38
WECC	38.7% (24)	27.4% (17)	21.0% (13)	6.5% (4)	6.5% (4)	0.0% (0)	62
						Comments and recommendations:	19
						<i>answered question</i>	116
						<i>skipped question</i>	26

64. Organization provides reasonable notice and opportunity for public comment, due process, openness, transparency, and balance of interests in conducting its statutory functions.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	4.7% (5)	40.6% (43)	25.5% (27)	21.7% (23)	7.5% (8)	0.0% (0)	106
FRCC	86.5% (32)	2.7% (1)	5.4% (2)	2.7% (1)	2.7% (1)	0.0% (0)	37
MRO	66.7% (30)	8.9% (4)	15.6% (7)	4.4% (2)	4.4% (2)	0.0% (0)	45
NPCC	70.7% (29)	12.2% (5)	4.9% (2)	7.3% (3)	4.9% (2)	0.0% (0)	41
RFC	57.1% (28)	16.3% (8)	14.3% (7)	8.2% (4)	4.1% (2)	0.0% (0)	49
SERC	60.9% (28)	26.1% (12)	4.3% (2)	4.3% (2)	4.3% (2)	0.0% (0)	46
SPP	49.0% (25)	29.4% (15)	7.8% (4)	11.8% (6)	2.0% (1)	0.0% (0)	51
TRE	73.7% (28)	10.5% (4)	7.9% (3)	5.3% (2)	2.6% (1)	0.0% (0)	38
WECC	38.7% (24)	30.6% (19)	14.5% (9)	9.7% (6)	6.5% (4)	0.0% (0)	62
						Comments and recommendations:	23
						<i>answered question</i>	<b>115</b>
						<i>skipped question</i>	<b>27</b>

65. Organization has established rules that assure its independence of users, owners and operators of the bulk power system while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any NERC committee or subordinate organizational structure.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	16.5% (18)	39.4% (43)	17.4% (19)	22.9% (25)	3.7% (4)	0.0% (0)	109
FRCC	86.5% (32)	8.1% (3)	2.7% (1)	2.7% (1)	0.0% (0)	0.0% (0)	37
MRO	67.4% (29)	16.3% (7)	11.6% (5)	4.7% (2)	0.0% (0)	0.0% (0)	43
NPCC	70.0% (28)	17.5% (7)	2.5% (1)	10.0% (4)	0.0% (0)	0.0% (0)	40
RFC	56.3% (27)	18.8% (9)	12.5% (6)	10.4% (5)	0.0% (0)	2.1% (1)	48
SERC	60.0% (27)	26.7% (12)	4.4% (2)	6.7% (3)	2.2% (1)	0.0% (0)	45
SPP	52.0% (26)	28.0% (14)	10.0% (5)	10.0% (5)	0.0% (0)	0.0% (0)	50
TRE	75.7% (28)	13.5% (5)	5.4% (2)	5.4% (2)	0.0% (0)	0.0% (0)	37
WECC	50.8% (31)	19.7% (12)	14.8% (9)	9.8% (6)	3.3% (2)	1.6% (1)	61
						Comments and recommendations:	16
						<i>answered question</i>	116
						<i>skipped question</i>	26

66. Organization provides for fair and balanced stakeholder representation in applicable areas of decision-making.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	12.0% (13)	37.0% (40)	16.7% (18)	26.9% (29)	6.5% (7)	0.9% (1)	108
FRCC	88.9% (32)	5.6% (2)	0.0% (0)	5.6% (2)	0.0% (0)	0.0% (0)	36
MRO	67.4% (29)	14.0% (6)	7.0% (3)	9.3% (4)	2.3% (1)	0.0% (0)	43
NPCC	67.5% (27)	15.0% (6)	10.0% (4)	7.5% (3)	0.0% (0)	0.0% (0)	40
RFC	54.2% (26)	14.6% (7)	14.6% (7)	14.6% (7)	0.0% (0)	2.1% (1)	48
SERC	59.1% (26)	15.9% (7)	11.4% (5)	11.4% (5)	2.3% (1)	0.0% (0)	44
SPP	50.0% (25)	26.0% (13)	16.0% (8)	8.0% (4)	0.0% (0)	0.0% (0)	50
TRE	73.0% (27)	10.8% (4)	8.1% (3)	8.1% (3)	0.0% (0)	0.0% (0)	37
WECC	50.0% (31)	22.6% (14)	8.1% (5)	11.3% (7)	6.5% (4)	1.6% (1)	62
						Comments and recommendations:	22
						<i>answered question</i>	115
						<i>skipped question</i>	27

67. Organization is effective in using stakeholder resources in the conduct of its statutory functions.

	NA – Not applicable or have no opinion	1 – Fully agree	2	3 – Neutral	4	5 – Fully Disagree	Response Count
NERC	17.8% (19)	26.2% (28)	19.6% (21)	30.8% (33)	5.6% (6)	0.0% (0)	107
FRCC	88.9% (32)	2.8% (1)	5.6% (2)	2.8% (1)	0.0% (0)	0.0% (0)	36
MRO	70.5% (31)	11.4% (5)	9.1% (4)	9.1% (4)	0.0% (0)	0.0% (0)	44
NPCC	70.0% (28)	15.0% (6)	10.0% (4)	5.0% (2)	0.0% (0)	0.0% (0)	40
RFC	58.3% (28)	8.3% (4)	16.7% (8)	16.7% (8)	0.0% (0)	0.0% (0)	48
SERC	63.6% (28)	18.2% (8)	9.1% (4)	6.8% (3)	2.3% (1)	0.0% (0)	44
SPP	57.1% (28)	22.4% (11)	12.2% (6)	8.2% (4)	0.0% (0)	0.0% (0)	49
TRE	73.0% (27)	8.1% (3)	10.8% (4)	8.1% (3)	0.0% (0)	0.0% (0)	37
WECC	51.6% (32)	17.7% (11)	9.7% (6)	14.5% (9)	6.5% (4)	0.0% (0)	62
				Comments and recommendations:			22
				<i>answered question</i>			114
				<i>skipped question</i>			28

68. Comments and recommendations:	
	Response Count
	11
<i>answered question</i>	11
<i>skipped question</i>	131



**Principal Recommendations for Improvement**

69. Since NERC was certified as the ERO in July 2006, the following are the major improvements seen in NERC and the applicable Regional Entity(ies):

	Response Count
	58
<i>answered question</i>	58
<i>skipped question</i>	84

70. The following are principal recommendations for continuing improvement (please number each distinct recommendation and indicate whether it applies to NERC or one or more Regional Entities):

	Response Count
	74
<i>answered question</i>	74
<i>skipped question</i>	68